DREDGED MATERIAL RESEARCH PROGRAM

TECHNICAL REPORT D-77-6

AQUATIC DISPOSAL FIELD INVESTIGATIONS EATONS NECK DISPOSAL SITE LONG ISLAND SOUND

APPENDIX F: PREDISPOSAL BASELINE CONDITIONS OF PHYTOPLANKTON ASSEMBLAGES

by

Robert Nuzzi

New York Ocean Science Laboratory
Montauk, New York

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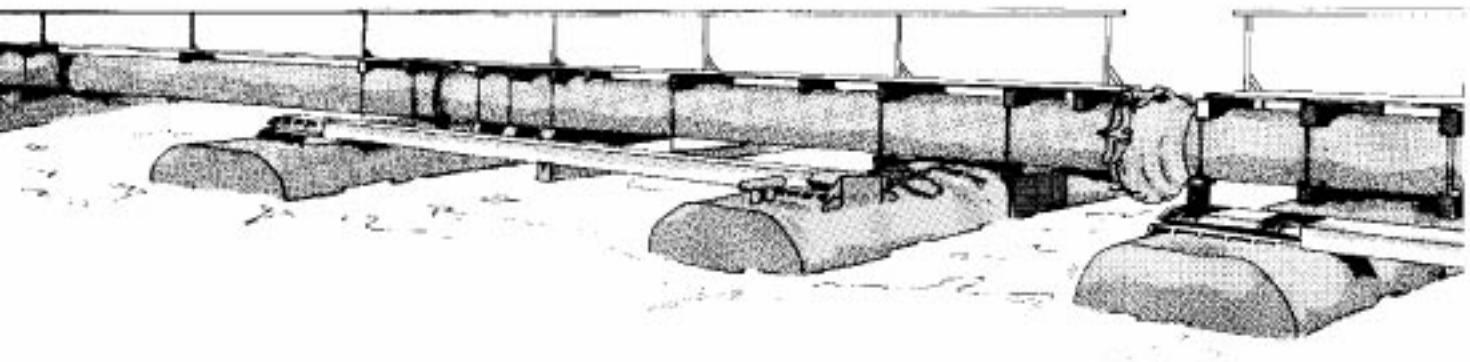
Final Report



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AQUATIC DISPOSAL FIELD INVESTIGATIONS
EATONS NECK DISPOSAL SITE
LONG ISLAND SOUND

Appendix A: Hydraulic Regime and Physical Characteristics of Bottom Sediment

Appendix B: Water-Quality Parameters and Physicochemical Sediment Parameters

Appendix C: Baseline Studies of Plankton, Nekton, and Benthic Invertebrate Populations

Appendix D: Predisposal Baseline Conditions of Demersal Fish Assemblages

Appendix E: Predisposal Baseline Conditions of Zooplankton Assemblages

Appendix F: Predisposal Baseline Conditions of Phytoplankton Assemblages

DEPARTMENT OF THE ARMY
WATERWAYS EXPERIMENT STATION, CORPS OF ENGINEERS
P. O. BOX 631
VICKSBURG, MISSISSIPPI 39180

IN REPLY REFER TO: WESYV

2 September 1977

SUBJECT: Transmittal of Technical Report D-77-6 (Appendix F)

TO: All Report Recipients

1. The technical report transmitted herewith represents the results of one of several research efforts (Work Units) undertaken as part of Task 1A, Aquatic Disposal Field Investigations of the Corps of Engineers' Dredged Material Research Program. Task 1A is a part of the Environmental Impacts and Criteria Development Project (EICDP), which has a general objective determination of the magnitude and extent of effects of disposal sites on organisms and the quality of surrounding water, and the rate, diversity, and extent such sites are recolonized by benthic flora and fauna. The study reported on herein was an integral part of a series of research contracts jointly developed to achieve the EICDP general objective at the Eatons Neck Disposal Site, one of five sites located in several geographical regions of the United States. Consequently, this report presents results and interpretations of but one of several closely interrelated efforts and should be used only in conjunction with and consideration of the other related reports for this site.

2. This report, Appendix F: Predisposal Baseline Conditions of Phytoplankton Assemblages, is one of the six contractor-prepared reports that are appended to the Waterways Experiment Station Technical Report D-77-6 entitled: Aquatic Disposal Field Investigations, Eatons Neck Disposal Site, Long Island Sound. The titles of the contractor-prepared appendices of this series are listed on the inside front cover of this report. The technical report provides additional results, interpretations, and conclusions not found in the individual contractor reports and provides a comprehensive summary and synthesis overview of the entire project.

3. The purpose of this report, conducted as Work Unit 1A06C, was to collect baseline data concerning the phytoplankton populations at the Eatons Neck disposal site for future comparisons with similar data from other areas. The report included a determination of the distribution, abundance and type of phytoplankton in the Eatons Neck disposal area and a reference site. Also included is a primary productivity study comparing the disposal area and reference site.

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4. The conclusion of the report, based on the evidence presented, was that there was little difference in the composition and abundance of the phytoplankton found at the three stations sampled, of which two were in the disposal area and one was the reference site. The results of this study have shown that field sampling for the effects of a disposal site on phytoplankton can draw very few conclusions. Studies of this type in the future should probably be confined to laboratory tests.

5. The baseline evaluations of all the EICDP field sites were developed to determine the base or ambient physical, chemical, and biological conditions at the respective sites from which to determine impacts due to the subsequent disposal operations. Where the dump sites had historical usage, the long-term impacts of dumping at these sites could also be ascertained. Controlled disposal operations at the Eatons Neck site, however, did not occur due to local opposition to research activities and even though the Eatons Neck project was terminated after completion of the baseline, this information will be useful in evaluating the impacts of past disposal at this site. The results of this study are particularly important in determining placement of dredged material for open-water disposal. Reference studies, as well as the ones summarized in this report, will aid in determining the optimum disposal conditions and site selection in relation to the phytoplankton assemblages of the dump site and surrounding areas.

JOHN L. CANNON
Colonel, Corps of Engineers
Commander and Director

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The major goal of the Eatons Neck disposal site field investigation was to evaluate the effects of aquatic disposal of dredged material on organisms and water quality, including the significance of physical, chemical, and biological factors that influence the rate of disposal site recolonization by benthic animals.

A comprehensive research program was planned and conducted at Eatons
(Continued)

20. ABSTRACT (Continued).

Neck in order to evaluate cause and effect relationships associated with the impacts of open-water disposal.

This volume presents the results of an investigation to determine the baseline conditions of the phytoplankton population at the disposal site for future comparison with similar data collected after the disposal of dredged material. The ultimate objective is to determine the effects of the open-water disposal of dredged material on the phytoplankton population located within the area of the Eatons Neck disposal site.

By using the Shannon-Weaver and the Simpson indexes it was determined that little variation existed in the diversity of the phytoplankton population at each station (EN1, EN2, and EN3) and depth measured. The exception to this occurred in the October and June sampling periods when stations EN1 and EN2 showed distinctly different diversities for the surface, middepth, and near-bottom samples. The diversity of the populations at Station EN3 was approximately equal for each depth.

The study concludes that, although it is difficult to draw any conclusions prior to a more thorough statistical analysis, it appears that there is little difference in the composition and abundance of the phytoplankton found at the three stations.

Preface

This report presents the results of an investigation to determine the baseline conditions of the phytoplankton population at the Eatons Neck Disposal Site, Long Island Sound, New York.

The study was prepared for the Office, Chief of Engineers, and supported by the U. S. Army Engineer Waterways Experiment Station (WES), Environmental Effects Laboratory (EEL), Vicksburg, Mississippi, under Contract No. DACW51-75-C-0016 to the New York Ocean Science Laboratory, Montauk, New York. The report forms part of the EEL Dredged Material Research Program (DMRP). Contracting was handled by the New York District (NYD); COL Thomas C. Hunter, CE, NYD, was Contracting Officer.

The report was written by Robert Nuzzi of the New York Ocean Science Laboratory. The following New York Ocean Science Laboratory personnel assisted in the collecting, sorting, and identification of the samples: Grant Matheke and Carl Zimmermann.

The study was conducted under the direction of the following EEL personnel: Dr. R. M. Engler, Environmental Impacts and Criteria Development Project, Project Manager, and J. R. Reese, Site Manager. The study was under the general supervision of Dr. John Harrison, Chief, EEL.

Commanders and Directors of WES during the study and preparation of this report were COL G. H. Hilt, CE, and COL J. L. Cannon, CE. Technical Director was Mr. F. R. Brown.

Contents

Introduction

1. This study is part of the Dredged Material Research Program of the U. S. Army Corps of Engineers and was performed in conjunction with other biological, chemical, and physical investigations of the study area. The primary purpose of the present study was to collect baseline data concerning the phytoplankton population in the area for future comparison with similar data collected after the disposal of dredged material. The ultimate objective was to determine the effects of the open-water disposal of dredged material on the phytoplankton population located within the area of the Eatons Neck disposal site (Figure F1).

2. Prior studies of phytoplankton within Long Island Sound include those of Nuzzi[1,2] in the areas of Shoreham and Jamesport, Riley and Conover[3] in the entire Sound, and Conover[4] in the central portion of the Sound. There have been no detailed investigations within the present area of concern.

Methods and Materials

Population studies

3. Water samples were collected from three depths (2-3 ft below the surface, middepth, and 2-3 ft above the bottom) at three stations in the study area for the analysis of the phytoplankton population. Stations EN1 and EN2 were located within the disposal site while station EN3,

located outside the perimeter of the site, was to serve as a control station (Figure F1).

4. Samples were collected in 5-ℓ Niskin bottles 12 times over a 9-month period (October 1974-June 1975). The phytoplankton in 1 ℓ of water were concentrated with a continuous plankton centrifuge immediately after collection. A portion of the concentrated sample was preserved with neutral buffered formalin (final concentration 3 percent) and a portion was left unpreserved and viewed microscopically in the field in an attempt to identify and enumerate those organisms that may have been damaged by fixation. The preserved samples were returned to the laboratory for detailed examination.

5. Microscopic analysis of both fixed and unfixed samples consisted of placing an 0.1-mℓ aliquot of the concentrated sample in a nannoplankton counting chamber[5] upon which various types of counts, depending upon cell size and number, were performed under 100X and 400X magnification. At least 10 field counts (a wide field being delineated by the microscope field and a narrow field by a Whipple disc placed in one eyepiece) and three survey counts (a scan of the entire counting chamber) were performed. The average of the counts was multiplied by the appropriate factors to yield results as cells per liter.

6. Data collected previously from the Shoreham area of Long Island Sound[1] did not indicate a need for replicate sampling. During that

study the range of duplicate samples was slightly greater than the mean only 3 times in 66 cases.

Productivity studies

7. Primary production, as carbon fixed per unit area (or volume) per unit time was estimated in December, February, and April at one station within the disposal site (station EN2) and at one control station (station EN3) by determining the uptake of radioactive carbon[6]. Light and dark bottles were filled in duplicate with water from three depths corresponding to 100 percent (surface), 10 percent, and 1 percent of the incident surface radiation as measured with a submarine photometer (G. M. Mfg.). After the addition of carbon-14 the bottles were resuspended in situ at the collection depths for incubation. At the end of the incubation period (2-6 hr) the samples were collected, fixed, filtered, and delivered to Dr. E. Powers of the State University of New York at Stony Brook for final analysis, using a liquid scintillation spectrometer.

Results

Population studies

8. Seasonal variations. Table F1 summarizes the species found during each sampling date at the Eatons Neck site (summary of all stations and depth). The cell counts and the percent composition of each species at each station, depth, and sampling date are given in Tables F2 and F3. These data are summarized in Tables F4a and F4b.

9. Figure F2 presents the seasonal variation of the phytoplankton population of the entire site (average of stations EN1, EN2, and EN3, surface, middepth, and near bottom). Cell numbers were lowest (ca 2 x 10^4) in October and increased slightly in November and December with a small decline in January. Cell numbers remained low until late March when a dramatic increase occurred. The population reached its highest point (>2 x 10^6 cells per liter) in March after which it decreased to about 10^5 cells per liter by May 1975.

10. A number of factors are probably involved in the decline of the population including zooplankton grazing,[3] nutrient depletion, and self-inhibition due to shading. The results of a study by Purdin[7] also suggest these factors. Purdin noted that the decline of the March 1973 phytoplankton bloom in Long Island Sound, near Shoreham, coincided with a dramatic increase of the copepods *Acartia clausii* and *Temora longicarnis*. Purdin observed a second increase in the phytoplankton population in May; this was followed closely by an increase in the standing crop of *A. clausii, A., tonsa, Temora,* and *Labidocera*.

11. The October phytoplankton was dominated by *Prorocentrum redfieldii, Thalassionema nitzschiodes, Skeletonema costatum,* and *Thalassiosira* spp. at stations EN1 and EN3. At station EN2, *Chrysocromulina* sp. and *P. redfieldii* were codominant, although *T. nitzschioides, S. costatum,* and *Thalassiosira* spp. were present in numbers comparable to stations EN1 and EN3. From November through February, *T. nitzschioides* was dominant. *Melosira sulcata* and *Thalassiosira* spp. were also common during this period.

12. During March and April, *Thalassiosira nordenskioldii* and *Skeletonema costatum* assumed dominance, with *Bacteriosira fragilis*, *Asterionella japonica*, and *Melosira sulcata* also being abundant.

13. The dominant species in May were *Ebria tripartita* and *Thalassionema nitzschioides*, followed in June by the dominance of unidentified flagellates.

14. Horizontal and vertical variations. As indicated in Figures F3-F5, there was little variation in the phytoplankton population between stations EN1, EN2, and EN3, and little variation between surface, mid-depth, and near-bottom populations, although the surface population was generally the largest. This was particularly evident during the October and June sampling.

15. Diurnal variations. In an effort to determine the significance of seasonal variations, samples were collected five times over a 12-hr period to determine the extent of population variation over a complete tidal cycle. This was performed on four separate occasions (November, January, and twice in April). The results (Figure F6) indicate only minor fluctuations over the 12-hr period and, while no statistical analysis was performed, there does not appear to be any correlation of cell numbers with tidal current.

16. Species diversity. The index of diversity can yield indications of the effects of environmental conditions on a community and

information concerning the environmental conditions to which the community is exposed. In general, the diversity index will be lowered as the environment becomes stressed by physical, chemical, or biological factors[8].

17. Two of the commonly used indexes of diversity have been applied in the present study: the Shannon-Weaver index[9] and the Simpson index[10]. The formula and a description of each index is given by Pielou[11]. Both indexes were calculated as log to the base 10.

18. There was little variation in the diversity of the phytoplankton population at each station and depth (Figures F7-F9) with the exception of the October and June sampling periods when stations EN1 and EN2 showed distinctly different diversities for the surface, middepth, and near-bottom samples. The diversity of the populations at station EN3 was approximately equal for each depth. The greater vertical homogeneity of the water column at station EN3 may be due to increased vertical mixing caused by the proximity of the station to a reef area.

19. The diversity at the site was greatest in October after which it decreased through the winter months. The diversity increased at the onset of the winter-spring flowering and remained fairly constant from February through April, at which point a decrease was again noted. Minor fluctuations in diversity may be due to diurnal fluctuations as indicated in Figures F10 and F11. These figures reveal 0.2 as the maximum variation obtained during diurnal sampling periods.

Productivity Studies

20. Table F5 presents the results of the productivity studies performed at stations EN2 and EN3. Maximum values at both stations occurred in December. Minimum values were found in April at station EN2 and in February at station EN3.

21. Station EN3 had higher productivity values at the depth of 10 percent incident radiation during February and April while productivity values at station EN2 were always highest at the surface.

22. The small number of data points makes it difficult to present a meaningful discussion of primary productivity at the Eatons Neck site.

Discussion

23. The phytoplankton population at Eatons Neck generally follows the pattern described by Conover[4] and Riley[12] for Long Island Sound. These authors reported maximum cell numbers in early March 1953 and mid-February 1954. The maximum population found during the present study occurred in March 1975.

24. The major species found at Eatons Neck, and their time of occurrence, also agree with the data of Conover[4] and Riley[12]. Of the 71 taxa noted during this study (Table F1), 21 were found to comprise at least 5 percent of the total population during any one sampling period with 10 species comprising more than 50 percent of the population at one time or another (Table F6). Riley[12] indicates 34 of 150 species as comprising

at least 5 percent of the total population in Long Island Sound over an 8-yr period with six species comprising at least 50 percent of the population at certain times. Of the 13 species that Riley considered to be particularly significant in the area, six were found at the same level in the present study (*Melosira sulcata, Skeletonema costatum, Thalassionema nitzschioides, Thalassiosira decipiens, Thalassiosira nordenskioldii,* and *Prorocentrum scutellum,* Table F6). In addition, three species identified by Riley[12] as being major constituents of the population were found during the summer period not covered by this study.

25. There is also the possibility that, of the remaining organisms, some or all may have been identified differently. For instance, *Detonula, Schröderella,* and *Bacteriosira* are difficult to distinguish at times, as are various species of *Thalassiosira.*

Conclusions

26. Although it is difficult to draw any conclusions prior to a more thorough statistical analysis and because of the cursory nature of the investigation, it appears that there is little difference in the composition and abundance of the phytoplankton found at the three stations.

27. Due to the cancellation of the disposal experiment it was, of course, impossible to make the originally planned comparison between pre- and postdisposal conditions.

References

1. Nuzzi, R., "Preoperational Ecological Monitoring Program of the Marine Environs at the Long Island Lighting Company, Shoreham Nuclear Power Station, Shoreham, Long Island, N. Y." Vol II, Section III Phytoplankton. New York Ocean Science Laboratory, Montauk, N. Y. 1974.

2. Nuzzi, R., "Present Aquatic Ecology - Jamesport" in Application to the New York State Board on Electric Generation and the Environment Vol 3, Long Island Lighting Co., N. Y. 1975.

3. Riley, G. A. and Conover, S. M., "Phytoplankton of Long Island Sound 1954-1955", Bulletin of the Bingham Oceanographic Collection, Vol 19, 1967.

4. Conover, S. A. M., "Oceanography of Long Island Sound, 1952-1954 IV. Phytoplankton", Bulletin of the Bingham Oceanographic Collection, Vol 15, 1956.

5. Palmer, C. M. and Maloney, T. E., "A New Counting Slide for Nannoplankton", American Society of Limnology and Oceanography Special Publication No. 21, March 1954.

6. Strickland, J. D. H. and Parsons, T. R., "A Practical Handbook of Seawater Analysis", Fisheries Research Board of Canada, Ottawa, 1968.

7. Purdin, J., "The Population Fluctuation of Major Adult Copepods in Long Island Sound Near Shoreham", Abstracts of the 6th Annual Long Island Sound Conference, Current Research in an Urban Sea: Long Island Sound, New York Ocean Science Laboratory, Montauk, N. Y. 1973.

8. Odum, E. P., Fundamentals of Ecology, W. B. Saunders Co., 1959.

9. Shannon, C. E. and Weaver, W., The Mathematical Theory of Communication, U. of Illinois Press, Urbana, 1949.

10. Simpson, E. H., "Measurement of Diversity", Nature 163: 688, 1949.

11. Pielou, E. C., Ecological Diversity, John Wiley and Sons, 1975.

12. Riley, G. A., "The Plankton of Estuaries" in Estuaries, G. H. Lauff, ed. AAAS Publication No. 83, Washington, D. C. 1967.

Table F1

Summary of Species Occurrence for All Stations by Sampling Date

Organism	Sampling Date 29 Oct 1974	19 Nov 1974	20 Dec 1974	3 Jan 1975	21 Jan 1975	20 Feb 1975	24 Mar 1975	1 Apr 1975	9 Apr 1975	22 Apr 1975	6 May 1975	10 Jun 1975
Bacillariophyta												
Actinoptychus undulatus				X	X							
Amorpha sp.	X											
Asterionella japonica	X	X					X	X	X	X	X	X
Bacteriosira fragilis							X	X	X	X		
Biddulphia aurita						X	X					
Biddulphia rhombus		X		X								
Cerataulina bergonii		X	X									
Chaetoceros debilis										X	X	
Chaetoceros decipiens	X		X	X						X		
Chaetoceros spp.	X	X	X									X
Chaetoceros spp.(Spore)		X	X		X	X						
Cocconeis sp.						X						
Corethron hystrix		X			X							
Coscinodiscus centralis		X		X	X	X						
Coscinodiscus granii						X						
Coscinodiscus lineatus		X	X	X	X							
Coscinodiscus radiatus		X	X	X	X							
Cyclotella striata			X	X	X	X						
Cyclotella sp.												X
Detonula confervacea						X						
Diploneis sp.		X	X									
Ditylum brightwellii	X											
Eucampia zoodiacus		X			X							X
Grammatophora angulosa	X											
Grammatophora marina	X	X	X		X	X		X				
Gyro-Pleurosigma sp.	X	X	X								X	X
Hemiaulus membranaceus			X		X							
Hemiaulus sinensis			X			X						
Licmophora sp.	X											
Leptocylindrus danicus	X	X		X					X	X		
Mastogloia sp.		X										
Melosira islandica		X										
Melosira italica				X	X							
Melosira moniliformis	X											
Melosira sulcata	X	X	X	X	X	X	X	X	X	X	X	X
Navicula spp.	X	X	X	X	X	X	X	X	X	X	X	X
Nitzschia bilobata						X						
Nitzschia closterium	X	X	X		X	X	X	X	X	X		
Nitzschia longissima						X	X					
Nitzschia sp.			X	X	X	X	X	X	X	X	X	
Rhizosolenia delicatula												X
Rhizosolenia hebetata							X	X	X	X		
Rhizosolenia shrubsolei												X
Skeletonema costatum	X	X	X	X	X	X	X	X	X	X	X	
Thalassionema nitzschioides	X	X	X	X	X	X	X	X	X	X	X	X
Thalassiosira spp.	X	X	X	X	X	X						X
Thalassiosira decipiens	X	X	X	X	X	X					X	
Thalassiosira gravida	X			X								
Thalassiosira nordenskioldii		X	X	X	X	X	X	X	X	X		
Thalassiosira rotula							X					
Unidentified diatoms					X		X	X				
Chlorophyceae												
Chlamydomonas sp. (cf)					X							
Chrysophyta												
Chrysochromulina sp.(cf)	X	X	X	X	X	X						
Distephanus speculum			X	X	X	X	X	X	X	X	X	
Ebria tripartita		X	X	X	X	X	X	X	X	X	X	X
Euglenophyta												
Euglena sp.		X	X	X	X	X	X	X	X		X	
Pyrrophyta												
Dinophysis acuminata	X	X	X	X	X		X					X
Glenodinium lenticula												X
Gymnodinium variabile	X	X	X		X			X				
Gymnodinium sp.					X							X
Gyrodinium grave		X				X						
Oxytoxum diploconus(cf)							X					
Peridinium (cf) minusculum												X
Peridinium pentagonum			X									
Peridinium trochoideum									X			X
Peridinium sp.							X	X		X		X
Phalacroma rotundatum	X											
Prorocentrum redfieldii	X	X	X		X	X	X	X	X			
Prorocentrum scutellum	X	X	X	X								
Prorocentrum triangulatum												X
Unidentified flagellates					X		X					X

Table F2a

Total Cell Count of Each Species by Depth[a] at Station EN1 Within Proposed Disposal Site

Organism	Sampling Date and Depth																																				
	29 Oct 74			19 Nov 74			20 Dec 74			3 Jan 75			21 Jan 75			20 Feb 75			24 Mar 75			1 Apr 75			9 Apr 75			22 Apr 75			6 May 75			10 Jun 75		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta																																					
Asterionella japonica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47.6	37.4	61.2	81.6	108.8	40.8	71.0	70.0	15.4	74.1	85.4	58.6	-	-	0.9	0.9	-	-
Bacteriosira fragilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	285.7	156.5	231.3	129.2	78.2	61.2	24.7	10.3	-	3.1	2.0	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biddulphia rhombus	-	-	-	0.1	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	3.1	-	-	1.9	-	-	-	-
Chaetoceros decipiens	-	-	-	-	-	-	-	-	0.2	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.	0.1	0.1	-	0.2	-	0.1	0.3	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.8	-
Chaetoceros spp.(Spore)	-	-	-	-	0.1	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cosconeis sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus centralis	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	-	-	-	-	-	0.3	0.1	-	-	0.1	0.1	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	-	1.0	0.7	1.8	1.3	0.6	0.7	0.1	0.1	1.8	1.0	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1307.9	967.7	73.5
Detonula confervacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diploneis sp.	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dityium brightwellii	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	0.5	0.2	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-	-	-
Grammatophora angulosa	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grammatophora marina	-	0.1	-	0.1	-	-	-	0.1	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	0.2	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	5.6	-	-
Hemiaulus sinensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Licmophora sp.	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nastogloia sp.	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira italica	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira moniliformis	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira sulcata	0.8	0.3	1.3	4.2	6.7	4.6	12.8	10.5	18.0	14.8	19.0	16.4	18.9	23.2	24.8	13.5	9.7	9.1	-	3.4	-	-	47.6	34.0	6.2	8.2	32.9	17.5	39.1	18.5	10.3	15.0	7.5	-	21.5	235.3
Navicula spp.	1.7	0.2	1.0	-	-	-	0.2	0.2	0.2	0.1	-	0.1	-	-	-	1.8	1.8	1.2	-	6.8	6.8	6.8	6.8	13.6	-	-	1.0	1.0	3.1	3.1	2.8	-	-	2.8	0.9	14.7
Nitzschia closterium	0.5	-	-	0.1	0.2	-	0.1	0.1	-	-	-	-	-	-	-	3.4	-	-	3.4	-	-	1.0	-	-	-	-	6.2	-	-	-	-	-	-	-	-	-
Nitzschia longissima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitzschia sp.	-	-	-	-	-	-	0.1	-	-	-	-	-	0.6	0.6	0.8	2.1	1.8	2.1	-	10.2	6.8	-	3.4	6.8	2.0	1.0	-	1.0	1.0	-	1.9	-	-	-	-	-	-
Rhizosolenia delicatula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	4.7	-
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	2.0	2.0	1.0	1.0	3.1	5.1	-	-	-	-	-	-
Rhizosolenia shrubsolei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-
Skeletonema costatum	1.7	0.5	1.2	0.1	0.2	0.1	-	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	1.5	1.8	1.2	585.0	619.0	1333.3	149.6	221.1	282.3	220.2	379.6	122.4	67.9	180.0	191.4	-	-	7.5	-	-	-
Thalassionema nitzschioides	1.5	0.2	1.0	13.0	15.1	10.2	45.5	49.2	55.9	45.8	36.6	34.2	55.2	58.6	47.8	52.8	47.6	50.8	98.6	204.0	176.9	129.2	193.9	207.5	135.8	150.2	137.8	334.4	301.4	295.3	20.6	12.2	37.4	12.2	9.4	14.7
Thalassiosira spp.	2.7	0.6	1.8	4.5	3.9	1.9	4.6	5.0	3.6	4.0	6.8	2.8	3.4	4.1	4.2	21.3	15.4	16.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	4.7	73.5
Thalassiosira decipiens	0.6	-	-	-	-	-	-	-	-	0.2	0.3	-	0.8	0.7	0.3	4.8	6.4	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thalassiosira gravida	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.2	0.1	988.7	785.7	741.5	486.4	506.8	1016.9	223.2	142.0	91.6	95.7	116.3	112.1	-	-	-	-	-	-
Unidentified diatoms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorophyceae																																				
Chlamydomonus sp. (sf)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysophyta																																				
Chrysochromulina sp.(sf)	-	-	-	1.7	0.7	0.1	2.3	1.2	0.8	0.4	0.3	0.5	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	0.1	0.1	-	-	10.2	-	-	6.8	-	-	8.2	2.0	-	10.3	5.1	2.0	2.8	0.9	0.9	-	-	-
Ebria tripartita	-	-	-	0.2	0.2	0.1	0.3	-	0.1	0.1	-	-	-	-	-	0.2	0.6	0.3	-	10.2	3.4	3.4	3.4	-	3.1	6.2	-	9.2	8.2	8.2	113.1	104.5	37.4	1.9	-	-
Euglenophyta																																				
Euglena sp.	-	-	-	0.2	-	-	0.1	0.1	-	-	-	-	-	-	-	0.2	-	-	-	6.8	-	13.4	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrrophyta																																				
Diaphanes acuminata	-	-	0.2	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ebriopsis testudo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-	-
Gymnodinium turbidum	0.3	-	-	-	-	0.1	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium (Protoperidinium)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium trochoideum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	-
Peridinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	1.0	-	-	-	-	-	-	0.9	-
Prorocentrum micans	5.4	0.6	1.5	1.1	-	0.1	0.1	-	0.1	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	3.4	1.0	1.0	-	-	-	-	-	-	-	-	-	-
Prorocentrum scutellum	-	-	0.3	0.2	0.1	0.1	0.1	0.1	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum triquetrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	-
Unidentified flagellates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179.0	115.6	-	-	-	-	-	-	-	-	-	-	-	-	564.5	-	-

[a] Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom.

Table F2b

Total Cell Count of Each Species by Depth* at Station EN2-1 Within Proposed Disposal Site

Organism	Sampling Date and Depth																														
	29 Oct 74			19 Nov 74			20 Dec 74			3 Jan 75			21 Jan 75			20 Feb 75			24 Mar 75			9 Apr 75			22 Apr 75			6 May 75			10 Jun 75		
	S	M	B	S	M	B	Om	3m	15m**	S	M	B	S	M	B	Om	4m	9m**	Om	3m	6m**	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta																																	
Amorpha sp.	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asterionella japonica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	115.6	30.6	27.2	193.4	48.4	21.6	173.9	693.4	232.5	-	-	-	0.9	-	-
Bacteriosira fragilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	319.7	248.3	64.6	107.0	5.1	3.1	-	6.2	6.2	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	102.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerataulina bergonii	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	10.3	4.1	-	-	-	-	-	-
Chaetoceros decipiens	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-	-
Chaetoceros spp.(Spore)	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	-	-	0.1	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	0.3	0.5	1.3	0.5	1.2	0.5	0.5	0.6	0.5	1.0	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1129.0	910.6	14.7
Diploneis sp.	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	-	-
Grammatophora marina	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	-	-	-	0.1	0.1	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hemiaulus sinensis	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	11.3	-	-	-	7.2	3.1	-	-	-	-	-	-
Melosira sulcata	-	0.8	0.6	7.1	3.8	4.2	23.0	10.6	15.1	12.2	22.2	15.3	14.5	19.4	23.2	8.1	8.0	5.4	159.9	-	-	6.2	77.2	39.1	81.2	-	21.6	3.7	9.4	30.9	-	7.5	58.8
Navicula spp.	-	0.1	0.2	-	-	-	0.2	-	-	0.1	0.2	-	0.2	0.1	-	0.8	1.1	0.3	-	6.8	3.4	-	-	3.1	-	2.0	-	-	-	-	-	0.9	-
Nitzschia bilobata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitzschia closterium	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.2	-	-	0.1	-	-	-	3.4	-	-	-	-	1.0	-	-	-	-	-	-	-
Nitzschia sp.	-	-	-	-	-	-	-	-	-	-	0.4	0.1	0.5	1.1	0.3	1.4	1.6	0.7	3.4	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhizosolenia delicatula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.5	1.9	-
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	13.4	1.0	1.0	5.1	6.2	1.0	-	-	-	-	-	-
Rhizosolenia shrubsolei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-
Skeletonema costatum	-	-	0.5	0.2	-	0.5	0.1	-	0.1	-	0.1	-	-	0.7	0.2	0.9	0.3	-	2472.7	1173.4	261.9	419.8	473.2	220.2	142.0	292.2	85.4	-	-	14.0	-	-	-
Thalassionema nitzschioides	0.1	0.4	1.1	17.3	14.4	13.6	70.2	63.6	57.8	38.6	34.7	36.2	58.2	61.4	62.1	37.5	43.2	39.7	204.1	170.0	197.3	156.4	114.2	136.8	379.6	167.7	213.0	23.4	52.4	134.6	-	6.6	-
Thalassiosira spp.	1.0	0.5	1.1	2.9	1.5	3.2	4.6	1.8	2.2	2.7	6.7	1.4	3.8	3.5	3.5	20.7	20.7	11.3	-	-	-	-	-	-	-	-	-	-	-	-	1.9	2.8	73.5
Thalassiosira decipiens	-	-	-	-	-	-	-	-	-	-	0.7	1.0	0.9	1.1	1.7	3.2	3.4	2.5	-	-	-	-	-	-	-	-	-	-	-	22.4	-	-	-
Thalassiosira nordenskioldii	-	-	-	-	-	-	0.4	0.1	-	-	-	-	0.1	-	-	0.4	-	-	1255.1	1081.6	462.5	173.9	139.9	121.4	112.1	227.4	75.1	-	-	-	-	-	-
Unidentified diatoms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysophyta																																	
Chrysochromulina sp.(cf)	33.0	-	-	1.1	0.1	0.9	0.9	0.5	0.5	0.3	0.2	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	6.8	-	-	-	1.0	3.1	3.1	7.2	5.1	-	0.9	-	-	-	-
Ebria tripartita	-	-	-	-	-	-	0.2	0.2	0.1	-	0.1	-	-	-	-	0.2	0.3	0.4	3.4	13.6	-	4.1	4.1	3.1	5.1	14.4	12.3	47.7	34.6	8.4	0.9	-	-
Euglenophyta																																	
Euglena sp.	-	-	-	-	-	-	-	0.2	-	0.1	-	-	-	-	-	0.1	0.2	-	-	3.4	-	1.0	-	-	-	-	-	-	0.9	0.9	-	-	-
Pyrrophyta																																	
Dinophysis acuminata	1.3	-	0.2	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Glenodinium lenticula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.3	-	-
Gymnodinium variabile	0.1	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gymnodinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	0.9	-
Gyrodinium grave	-	-	-	0.3	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxytoxum diplocomus(cf)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium pentagonum	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium trochoideum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	-	-	-	-	-	-	-	-
Peridinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Phalacroma rotundatum	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	10.6	1.4	1.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum scutellum	-	-	0.3	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum triangulatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	1.9	-
Unidentified flagellates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47.6	40.8	51.0	-	-	-	-	-	-	-	-	-	645.2	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom unless stated in metres.
** Sampling depths in metres correspond to 100%, 10%, and 1% of incident light intensity.

Table F2c

Total Cell Count of Each Species by Depth* at Station EN2-2 Within Proposed Disposal Site

Organism	Sampling Date and Depth																	
	29 Oct 74			19 Nov 74			21 Jan 75			24 Mar 75			1 Apr 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta																		
Asterionella japonica	0.2	-	-	-	-	-	-	-	-	243.5	16.2	64.9	17.0	64.6	17.0	376.5	335.4	81.3
Bacteriosira fragilis	-	-	-	-	-	-	-	-	-	730.5	275.9	178.5	115.6	34.0	10.2	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	113.6	-	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	10.3	-
Chaetoceros spp. (spore)	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	0.5	0.7	0.3	-	-	-	-	-	-	-	-	-
Grammatophora marina	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	-	0.2	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	2.0	-
Melosira italica	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Melosira sulcata	0.4	0.1	0.5	2.6	3.8	4.2	16.7	17.8	22.4	-	64.9	16.2	112.2	-	20.4	-	5.1	6.2
Navicula spp.	-	0.2	0.1	-	0.1	0.1	-	-	0.2	32.4	32.4	136.1	-	3.4	-	-	1.0	-
Nitzschia closterium	1.2	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	2.0	1.0	-
Nitzschia sp.	-	-	-	-	-	-	0.5	1.3	0.6	48.7	-	-	3.4	3.4	-	-	-	1.0
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	3.1	3.1
Skeletonema costatum	0.2	1.4	0.5	-	0.2	-	0.4	0.3	-	2191.5	2094.1	2970.1	85.0	142.9	98.6	72.0	184.2	98.8
Thalassionema nitzschioides	0.4	1.1	0.9	16.0	10.9	7.7	52.0	62.4	63.7	259.7	487.0	113.6	115.6	146.2	78.2	169.8	250.0	311.7
Thalassiosira spp.	10.0	1.6	1.0	3.8	2.1	1.3	3.8	4.1	4.1	-	-	-	-	-	-	-	-	-
Thalassiosira decipiens	-	-	-	-	-	-	0.6	1.9	1.8	-	-	-	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	-	-	-	-	0.3	0.1	0.1	3425.3	2970.7	2402.6	615.6	398.0	483.0	47.3	129.6	109.0
Unidentified diatoms	-	-	-	-	-	-	-	0.1	0.2	-	-	-	-	-	-	-	-	-
Chrysophyta																		
Chrysochromulina sp. (cf)	12.3	0.2	0.1	1.0	0.5	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	0.1	-	0.2	-	-	-	-	-	3.4	29.8	9.3	6.2
Ebria tripartita	-	-	-	-	-	-	0.1	-	-	32.4	16.2	16.2	3.4	-	3.4	20.6	8.2	13.4
Euglenophyta																		
Euglena sp.	-	-	-	-	-	-	-	-	-	-	81.1	16.2	10.2	6.8	-	-	-	-
Pyrrophyta																		
Dinophysis acuminata	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gymnodinium variabile	3.0	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	13.1	0.4	0.2	-	0.1	-	0.1	-	-	-	-	16.2	3.4	-	-	-	-	-
Prorocentrum scutellum	0.6	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified flagellates	-	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom.

Table F2d

Total Cell Count of Each Species by Depth* at Station EN2-3
Within Proposed Disposal Site

Organism	Sampling Date and Depth											
	19 Nov 74			21 Jan 75			1 Apr 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta												
Asterionella japonica	-	-	-	-	-	-	83.3	20.5	-	245.9	171.8	51.4
Bacteriosira fragilis	-	-	-	-	-	-	133.7	24.7	-	-	2.0	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	5.1	-	-
Cyclotella striata	-	-	-	0.8	0.7	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	-	-	0.1	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	11.3	-	-
Melosira islandica	-	-	0.1	-	-	-	-	-	-	-	-	-
Melosira sulcata	0.5	0.8	3.8	10.7	24.8	14.5	15.4	27.8	-	-	4.1	24.7
Navicula spp.	-	-	-	-	-	0.1	-	1.0	-	-	-	-
Nitzschia closterium	-	0.1	-	-	-	-	-	1.0	-	2.0	-	-
Nitzschia sp.	-	-	-	0.7	1.2	0.3	-	-	-	1.0	3.1	-
Rhizosolenia hebetata	-	-	-	-	-	-	2.0	2.0	-	3.1	-	-
Skeletonema costatum	-	-	-	-	0.1	0.1	238.7	69.9	-	78.2	92.6	59.7
Thalassionema nitzschioides	13.2	14.2	9.6	46.1	68.3	59.8	118.3	78.1	-	59.7	241.8	283.9
Thalassiosira spp.	1.5	3.1	2.1	2.8	3.7	2.7	-	-	-	-	-	-
Thalassiosira decipiens	-	-	-	2.7	2.6	2.8	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	0.1	-	-	-	443.4	255.1	-	70.0	115.2	90.5
Unidentified diatoms	-	-	-	0.1	0.7	0.1	-	-	-	-	-	-
Chrysophyta												
Chrysochromulina sp.(cf)	0.8	1.1	0.6	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	0.1	0.1	-	-	-	-	3.1	10.3	5.1
Ebria tripartita	0.1	-	-	0.1	0.1	0.1	-	-	-	14.4	3.1	10.3
Euglenophyta												
Euglena sp.	-	-	-	-	-	-	5.1	1.0	-	-	-	-
Pyrrophyta												
Dinophysis acuminata	0.1	-	-	-	0.1	-	-	-	-	-	-	-
Gymnodinium variabile	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-
Gyrodinium grave	-	0.1	-	-	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	-	0.2	0.1	-	-	-	2.0	-	-	-	-	-
Prorocentrum scutellum	-	-	0.1	-	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom.

Table F2e

Total Cell Count of Each Species by Depth* at Station EN2-4 Within Proposed Disposal Site

Organism	Sampling Date and Depth											
	19 Nov 74			21 Jan 75			1 Apr 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta												
Actinoptychus undulatus	-	-	-	0.1	-	-	-	-	-	-	-	-
Asterionella japonica	-	-	-	-	-	-	36.0	47.3	12.3	201.6	109.0	60.7
Bacteriosira fragilis	-	-	-	-	-	-	89.5	66.9	15.4	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	5.1	-	3.1
Chaetoceros decipiens	-	-	-	-	-	-	-	-	-	1.0	-	-
Chaetoceros spp.	-	0.1	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp. (Spore)	-	-	0.1	-	-	-	-	-	-	-	-	-
Coscinodiscus centralis	-	-	0.1	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	0.1	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	0.2	0.5	0.6	-	-	-	-	-	-
Eucampia zoodiacus	0.1	-	0.1	-	0.1	-	-	-	-	-	-	-
Grammatophora marina	-	-	-	-	-	-	1.0	-	-	-	-	-
Gyro-Pleurosigma sp.	-	0.1	0.1	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	1.0	-	-
Melosira italica	-	-	-	0.1	-	-	-	-	-	-	-	-
Melosira sulcata	2.1	6.7	3.8	12.4	21.6	16.2	14.4	16.5	-	19.5	7.2	65.8
Navicula spp.	-	-	-	-	-	-	-	1.0	1.0	2.0	1.0	4.1
Nitzschia closterium	0.1	0.2	-	0.1	0.1	-	-	2.0	-	-	1.0	1.0
Nitzschia sp.	-	-	-	0.8	0.8	-	4.1	1.0	1.0	-	-	-
Rhizosolenia hebetata	-	-	-	-	-	-	2.0	2.0	-	4.1	-	-
Skeletonema costatum	-	0.2	0.1	0.1	0.1	-	61.7	233.5	298.4	38.1	59.6	148.1
Thalassionema nitzschioides	21.1	17.0	19.7	53.8	65.0	59.7	81.3	87.4	106.0	189.3	311.7	328.2
Thalassiosira spp.	5.2	4.8	4.9	2.7	3.1	2.6	-	-	-	-	-	-
Thalassiosira decipiens	-	-	0.1	2.7	2.5	2.4	-	-	-	-	-	-
Thalassiosira nordenskioldii	0.1	-	0.5	-	-	-	322.0	366.3	257.2	55.5	115.2	104.9
Unidentified diatoms	-	-	-	-	0.1	-	-	-	-	-	-	-
Chrysophyta												
Chrysochromulina sp. (cf)	0.5	0.6	0.6	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	0.1	0.1	-	-	1.0	-	24.7	8.2	3.1
Ebria tripartita	-	-	-	0.1	-	-	1.0	4.1	2.0	21.6	8.2	7.2
Euglenophyta												
Euglena sp.	-	-	0.1	-	-	-	1.0	-	-	-	-	-
Pyrrophyta												
Dinophysis acuminata	0.1	-	0.1	-	-	0.2	-	-	-	-	-	-
Gymnodinium variabile	0.1	0.1	-	-	-	-	-	-	-	-	-	-
Gymnodinium sp.	-	-	-	0.1	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	-	0.2	0.1	-	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom.

Table F2f

Total Cell Count of Each Species by Depth* at Station EN2-5 Within Proposed Disposal Site

Organism	Sampling Date and Depth								
	19 Nov 74			21 Jan 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B
Bacillariophyta									
Asterionella japonica	0.1	-	-	-	-	-	283.9	114.2	59.6
Chaetoceros debilis	-	-	-	-	-	-	10.3	6.2	-
Coscinodiscus radiatus	-	-	-	-	-	0.2	-	-	-
Cyclotella striata	-	-	-	0.8	0.5	0.2	-	-	-
Melosira sulcata	1.7	-	-	15.3	22.1	19.4	22.6	12.3	17.4
Navicula spp.	-	-	-	0.3	0.5	0.1	1.0	2.0	6.2
Nitzschia closterium	0.2	-	-	0.1	-	-	2.0	3.1	1.0
Nitzschia sp.	-	-	-	0.2	0.7	0.1	-	-	-
Rhizosolenia hebetata	-	-	-	-	-	-	10.3	-	2.0
Skeletonema costatum	-	-	-	-	-	0.1	39.1	161.5	176.0
Thalassionema nitzschioides	21.1	-	-	52.6	72.4	71.4	218.1	210.9	330.2
Thalassiosira spp.	3.8	-	-	3.5	2.1	1.3	-	-	-
Thalassiosira decipiens	-	-	-	2.2	1.8	2.7	-	-	-
Thalassiosira nordenskioldii	-	-	-	0.2	-	-	61.7	91.6	139.9
Unidentified diatoms	-	-	-	0.4	-	-	-	-	-
Chrysophyta									
Chrysochromulina sp.(cf)	2.4	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	0.2	0.1	25.7	11.3	8.2
Ebria tripartita	-	-	-	0.1	0.2	0.3	20.6	4.1	6.2
Pyrrophyta									
Prorocentrum scutellum	0.2	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom.

Table F2g

Total Cell Count of Each Species by Depth* at Station EN3-1 Outside Proposed Site

Organism	Sampling Date and Depth																														
	29 Oct 74			19 Nov 74			20 Dec 74			3 Jan 75			21 Jan 75			20 Feb 75			24 Mar 75			9 Apr 75			22 Apr 75			6 May 75			10 Jun 75	
	S	M	B	S	M	B	Om	3m	15m**	S	M	B	S	M	B	Om	4m	9m**	Om	3m	6m**	S	M	E	S	M	B	S	M	B	S	M
Bacillariophyta																															
Actinoptychus undulatus	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-													
Asterionella japonica	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47.6	57.8	27.2	64.8	14.4	24.7	12.3	52.5	42.2	-	-	-	-	-
Bacteriosira fragilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	292.5	187.0	197.2	20.6	1.0	5.1	-	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerataulina bergonii	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	2.0	-	-	-	-	-
Chaetoceros decipiens	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.	-	-	0.1	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.(Spore)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus centralis	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus granii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	-	0.1	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	0.7	1.0	1.5	0.6	1.3	0.3	0.2	0.7	0.7	0.2	0.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	1209.7	1129.0	2
Cyclotella sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Detonula confervacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grammatophora marina	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	0.2	0.1	0.7	0.1	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hemiaulus membranaceus	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira sulcata	0.3	0.1	0.5	5.0	3.3	7.5	11.1	13.2	12.7	15.9	28.6	18.5	13.5	9.7	18.3	13.4	14.0	4.8	23.8	-	71.4	5.1	-	9.2	-	19.5	2.0	2.8	-	-	-	34.6	7
Navicula spp.	-	0.3	0.3	-	0.1	-	-	0.2	0.6	-	0.2	0.1	-	0.1	0.2	1.3	1.4	0.5	13.6	3.4	6.8	-	2.0	-	-	1.0	-	-	-	-	-	-
Nitzschia closterium	0.2	0.1	0.1	-	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	6.8	-	-	-	-	-	-	-	-	-	-	-
Nitzschia sp.	-	-	-	-	-	-	-	-	-	0.3	0.2	-	0.4	0.9	0.4	2.2	2.1	0.5	-	10.2	6.8	-	-	-	-	-	-	-	-	-	-	-	-
Rhizosolenia delicatula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.9	1.9
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	5.1	2.0	-	-	5.1	1.0	-	-	-	-	-
Skeletonema costatum	0.1	0.5	0.1	-	0.1	0.4	-	0.2	0.1	0.1	-	-	0.1	0.1	0.2	1.5	2.7	-	911.5	394.5	496.6	157.4	29.8	102.9	40.1	52.5	56.7	-	10.3	-	-	-
Thalassionema nitzschioides	0.8	1.0	1.8	17.7	20.8	19.3	60.2	67.6	57.3	35.2	43.7	18.4	67.6	54.5	69.0	53.9	49.0	41.6	129.2	64.6	40.8	159.5	169.8	170.8	161.5	242.8	265.4	19.6	37.4	55.2	5.6	8.4
Thalassiosira spp.	0.8	-	2.6	4.6	2.1	2.2	2.1	2.9	2.5	6.9	7.8	0.9	4.1	4.0	5.0	13.6	16.5	3.1	-	-	-	-	-	-	-	-	-	-	-	-	0.9	8.4
Thalassiosira decipiens	-	-	-	0.3	2.3	5.8	-	0.3	-	1.1	2.0	0.8	1.0	1.2	1.2	4.3	1.2	1.8	-	-	-	-	-	-	-	-	-	1.9	4.7	4.7	-	-
Thalassiosira gravida	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	-	1.4	0.3	0.1	-	-	0.1	-	-	-	-	0.2	-	-	-	-	921.8	860.5	927.8	102.9	59.7	93.6	32.9	84.4	82.3	-	-	-	-	-
Thalassiosira rotula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified diatoms	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysophyta																																
Chrysochromulina sp.(cf)	-	-	-	0.7	0.9	-	0.4	0.3	1.4	-	-	0.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	0.1	0.1	-	0.1	0.2	-	0.1	-	-	-	-	-	3.4	-	6.8	2.0	1.0	3.1	89.5	54.5	11.3	-	-	-	-	-
Ebria tripartita	-	-	-	-	-	-	0.2	-	0.1	0.4	-	0.1	0.2	0.3	-	-	-	0.1	6.8	6.8	6.8	6.2	3.1	1.0	8.2	22.6	2.0	72.9	35.5	9.4	1.9	0.9
Euglenophyta																																
Euglena sp.	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-
Pyrrophyta																																
Dinophysis acuminata	0.3	0.3	0.6	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glenodinium lenticula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-
Gymnodinium variabile	0.6	-	0.1	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gymnodinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	4.7	-
Gyrodinium grave	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium (cf) minusculum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-
Peridinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-
Prorocentrum redfieldii	4.0	1.1	1.2	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	10.2	13.6	6.8	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum scutellum	0.2	0.3	0.1	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum triangulatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	-
Unidentified flagellates	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	17.0	3.4	-	-	-	-	-	-	-	-	-	-	887.1	725.8

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom.
**Sampling depths in metres correspond to 100%, 10%, and 1% of incident light intensity.

Table F2h

Total Cell Count of Each Species by Depth* at Station EN3-2 Outside Proposed Disposal Site

Organism	Sampling Date and Depth 1 Apr 75 S	M	B
Bacillariophyta			
Asterionella japonica	57.8	27.2	37.4
Bacteriosira fragilis	112.2	37.4	34.0
Melosira sulcata	-	10.2	34.0
Nitzschia sp.	-	-	6.8
Rhizosolenia hebetata	3.4	-	3.4
Skeletonema costatum	105.4	47.6	81.4
Thalassionema nitzschioides	88.4	78.2	108.8
Thalassiosira nordenskioldii	663.3	605.4	428.6
Chrysophyta			
Ebria tripartita	3.4	3.4	-
Euglenophyta			
Euglena sp.	-	3.4	-
Pyrrophyta			
Gymnodinium variabile	3.4	-	-
Prorocentrum redfieldii	6.8	-	-

* Total cell counts are given as cells/litre x 10^3. Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom.

Table F3a

Percent Composition of Each Species by Depth* at Station EN1 within Proposed Disposal Site

Organism	Sampling Date and Depth																																		
	29 Oct 74			19 Nov 74			20 Dec 74			3 Jan 75			21 Jan 75			20 Feb 75			24 Mar 75			1 Apr 75			9 Apr 75			22 Apr 75			6 May 75			10 Jun 75		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta																																			
Asterionella japonica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	1.9	2.3	8.0	9.3	2.4	10.2	9.1	3.8	12.0	11.3	8.4	-	-	1.0	0.1	-	-
Asterionosira fragilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.1	7.8	8.6	12.7	6.7	3.7	3.5	1.3	-	0.5	0.3	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biddulphia rhombus	-	-	-	0.4	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	-	-	1.4	-	-	-	-
Chaetoceros decipiens	-	-	-	-	-	-	-	-	0.3	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.	0.6	3.7	-	0.8	-	0.6	0.5	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-
Chaetoceros spp. (Spore)	-	-	-	-	0.4	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cocconeis sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus centralis	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	-	-	-	-	-	0.5	0.2	-	-	0.2	0.2	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	-	-	-	-	-	0.1	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	-	2.0	0.9	2.7	1.9	1.1	0.9	0.1	0.1	1.8	1.1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69.3	94.1	17.9
Detonula confervacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diploneis sp.	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ditylum brightwellii	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	1.9	0.8	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-
Grammatophora angulosa	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grammatophora marina	-	3.7	-	0.4	-	-	-	0.2	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	1.2	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	0.3	-	-
Hemiaulus sinensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Licmophora sp.	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mastogloia sp.	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira italica	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira moniliformis	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira sulcata	4.9	11.0	15.3	15.9	24.5	26.0	19.1	15.4	22.5	21.9	29.0	29.8	23.7	26.4	31.6	13.1	11.0	10.6	-	0.2	-	-	4.0	2.0	0.9	1.1	8.1	2.8	5.2	2.7	6.7	11.2	8.2	-	2.1	57.2
Navicula spp.	10.5	7.4	11.7	-	-	-	0.3	0.3	0.3	0.2	-	0.2	-	-	-	1.8	2.0	1.4	-	0.3	0.3	0.7	0.6	0.8	-	-	0.3	0.2	0.4	0.5	1.8	-	-	0.1	0.1	3.6
Nitzschia closterium	3.1	-	-	0.4	0.7	-	0.2	0.2	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.3	-	-	0.1	-	-	-	0.8	-	-	-	-	-	-	-
Nitzschia longissima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitzschia sp.	-	-	-	-	-	-	0.2	-	-	-	-	-	0.7	0.7	1.0	2.1	2.0	2.4	-	0.5	0.3	-	0.3	0.4	0.3	0.1	-	0.2	0.1	-	1.2	-	-	-	-	-
Rhizosolenia delicatula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.5	-
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	0.3	0.3	0.3	0.2	0.4	0.7	-	-	-	-	-	-
Rhizosolenia shrubsolei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Skeletonema costatum	10.5	18.5	14.1	0.4	0.7	0.6	-	0.2	0.3	0.2	0.2	0.4	0.1	0.2	0.1	1.5	2.0	1.4	28.9	30.7	49.8	14.7	18.8	16.8	31.5	49.1	30.3	11.0	23.9	27.6	-	-	8.2	-	-	-
Thalassionema nitzschioides	9.3	7.4	11.7	49.2	55.1	57.6	68.0	72.2	69.9	67.8	56.0	62.2	69.2	66.8	60.9	51.1	54.2	59.1	4.9	10.1	6.6	12.7	16.5	12.4	19.4	19.4	34.1	54.2	39.9	42.5	13.5	9.1	40.8	0.6	0.9	3.6
Thalassiosira spp.	16.7	22.2	21.1	17.0	14.2	10.7	6.9	7.3	4.5	5.9	10.4	5.1	4.2	4.6	5.4	20.6	17.5	19.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.5	17.9
Thalassiosira decipiens	3.7	-	-	-	-	-	-	-	-	0.3	0.5	-	1.0	0.7	0.4	4.7	7.1	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thalassiosira gravida	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.2	0.1	48.8	38.9	27.7	47.8	43.2	60.7	31.9	18.4	23.2	15.5	15.4	16.1	-	-	-	-	-	-
Unidentified diatoms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorophyceae																																				
Chlamydomonas sp. (cf)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysophyta																																				
Chrysochromulina sp. (cf)	-	-	-	6.4	2.6	0.6	3.4	1.8	1.0	0.6	0.5	0.9	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	-	0.2	0.1	-	-	-	-	-	0.1	0.1	-	-	0.5	-	-	0.7	-	-	1.2	0.3	-	1.7	0.7	0.3	1.8	0.7	1.0	-	-	-
Ebria tripartita	-	-	-	0.8	0.7	0.6	0.5	-	0.1	0.2	-	-	-	-	-	0.2	0.7	0.3	-	0.5	0.1	0.3	0.3	-	0.4	0.8	-	1.5	1.1	1.2	74.2	77.7	40.8	0.1	-	-
Euglenophyta																																				
Euglena sp.	-	-	-	0.8	-	-	0.2	0.2	-	-	-	-	-	-	-	0.2	-	-	-	0.3	-	1.3	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrrophyta																																				
Dinophysis acuminata	-	-	2.3	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glenodinium lenticula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Gymnodinium variabile	1.8	-	-	-	-	0.6	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Oxytoxum diploconus (cf)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium trochoideum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-
Peridinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	0.2	-	-	-	-	-	-	0.1	-
Prorocentrum redfieldii	33.5	22.2	17.6	4.2	-	0.6	0.2	-	0.1	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-
Prorocentrum scutellum	-	-	3.5	0.8	0.4	0.6	0.2	0.2	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum triangulatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Unidentified flagellates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4	4.3	-	-	-	-	-	-	-	-	-	-	-	-	28.6	-	-

Table F3b

Percent Composition of Each Species by Depth* at Station EN2-1 Within Proposed Disposal Site

Organism	Sampling Date and Depth																														
	29 Oct 74			19 Nov 74			20 Dec 75			3 Jan 75			21 Jan 75			20 Feb 75			24 Mar 75			9 Apr 75			22 Apr 75			6 May 75			10 Jun 75		
	S	M	B	S	M	B	Om	3m	15m**	S	M	B	S	M	B	Om	4m	9m**	Om	3m	6m**	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta																															
Amorpha sp.	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	1.1	2.5	17.8	5.6	3.9	21.0	48.3	35.3	-	-	-	0.1	-	-
Asterionella japonica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	8.9	6.0	9.8	0.6	0.6	-	0.4	1.0	-	-	-	-	-	-
Bacteriosira fragilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerataulina bergonii	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.7	0.6	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros decipiens	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-
Chaetoceros spp.(Spore)	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	-	-	0.4	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	0.3	0.7	1.7	0.9	1.8	0.9	0.6	0.7	0.5	1.3	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61.8	97.5	10.0
Diploneis sp.	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-
Grammatophora marina	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	-	-	-	0.3	0.5	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hemiaulus sinensis	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	0.5	0.5	-	-	-	-	-	-
Melosira sulcata	-	25.0	11.1	24.1	18.6	18.2	22.9	13.7	19.6	22.3	33.1	28.1	18.4	21.9	25.2	10.9	10.1	9.0	3.4	-	-	0.6	8.9	7.1	1.0	-	3.3	4.9	9.6	14.6	-	0.8	40.0
Navicula spp.	-	3.1	3.7	-	-	-	0.2	-	-	0.2	0.3	-	0.3	0.1	-	1.1	1.4	0.5	-	0.2	0.3	-	-	0.6	-	0.1	-	-	-	-	-	0.1	-
Nitzschia bilobata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitzschia closterium	-	-	-	-	0.5	-	-	-	-	-	-	-	-	0.2	-	-	0.1	-	-	-	0.3	-	-	-	-	0.1	-	-	-	-	-	-	-
Nitzschia sp.	-	-	-	-	-	-	-	-	-	-	0.6	0.2	0.6	1.2	0.3	1.9	2.0	1.2	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhizosolenia delicatula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	0.1	-
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	1.2	0.1	0.2	0.6	0.4	0.2	-	-	-	-	-	-
Rhizosolenia shrubsolei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-
Skeletonema costatum	-	-	9.3	0.7	-	2.2	0.1	-	0.1	-	0.2	-	-	0.8	0.2	1.2	0.4	-	32.7	41.9	24.4	38.6	54.8	39.7	17.1	20.4	12.9	-	-	6.6	-	-	-
Thalassionema nitzschioides	0.2	12.5	20.4	59.0	71.0	58.9	69.9	82.1	74.9	70.7	51.7	66.4	73.9	69.6	67.7	30.3	54.6	65.8	4.3	6.1	18.4	14.4	13.2	24.7	45.7	11.7	32.3	31.2	53.4	63.7	-	0.7	-
Thalassiosira spp.	2.1	15.6	20.4	9.8	7.4	13.9	4.6	2.3	2.8	4.9	9.9	2.6	4.8	3.9	3.8	27.8	26.1	18.7	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.3	50.0
Thalassiosira decipiens	-	-	-	-	-	-	-	-	-	-	1.0	1.8	1.1	1.2	1.8	4.3	4.3	4.1	-	-	-	-	-	-	-	-	-	-	-	10.6	-	-	-
Thalassiosira nordenskioldii	-	-	-	-	-	-	0.4	0.1	-	-	-	-	0.1	-	-	0.5	-	-	26.7	38.6	43.2	16.0	16.2	21.9	13.5	15.8	11.4	-	-	-	-	-	-
Unidentified diatoms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysophyta																																	
Chrysochromulina sp.(cf)	71.2	-	-	3.7	0.5	3.9	0.9	0.7	0.7	0.6	0.3	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	0.1	-	-	-	0.1	0.6	0.4	0.5	0.8	-	0.9	-	-	-	-
Ebria tripartita	-	-	-	-	-	-	0.2	0.3	0.1	-	0.2	-	-	-	-	0.3	0.4	0.7	0.1	0.5	-	0.4	0.5	0.6	0.6	1.0	1.9	63.8	35.2	3.9	0.1	-	-
Euglenophyta																																	
Euglena sp.	-	-	-	-	-	-	-	0.3	-	0.2	-	-	-	-	-	0.1	0.3	-	-	0.1	-	0.1	-	-	-	-	-	-	0.9	0.4	-	-	-
Pyrrophyta																																	
Dinophysis acuminata	2.8	-	3.7	-	-	-	-	-	-	0.2	0.2	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Glenodinium lenticula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-
Gymnodinium variabile	0.2	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gymnodinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	-
Gyrodinium grave	-	-	-	1.0	0.5	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxytoxum diploconus(cf)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium pentagonum	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium trochoideum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-
Peridinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Phalacroma rotundatum	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	22.8	43.7	22.2	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum scutellum	-	-	5.5	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum triangulatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	-
Unidentified flagellates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.5	4.8	-	-	-	-	-	-	-	-	-	35.3	-	-

* Total cell counts are given as cells/litre x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom unless stated in metres.
**Sampling depths in metres correspond to 100%, 10%, and 1% of incident light intensity.

Table F3f

Percent Composition of Each Species by Depth* at Station EN2-5 Within Proposed Disposal Site

Organism	Sampling Date and Depth								
	19 Nov 74			21 Jan 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B
Bacillariophyta									
Asterionella japonica	0.3	-	-	-	-	-	40.8	18.5	7.9
Chaetoceros debilis	-	-	-	-	-	-	1.5	1.0	-
Coscinodiscus radiatus	-	-	-	-	-	0.2	-	-	-
Cyclotella striata	-	-	-	1.1	0.5	0.2	-	-	-
Melosira sulcata	5.8	-	-	20.2	21.9	20.2	3.3	1.9	2.3
Navicula spp.	-	-	-	0.4	0.5	0.1	0.1	0.3	0.8
Nitzschia closterium	0.7	-	-	0.1	-	-	0.3	0.5	0.1
Nitzschia sp.	-	-	-	0.3	0.7	0.1	-	-	-
Rhizosolenia hebetata	-	-	-	-	-	-	1.5	-	0.3
Skeletonema costatum	-	-	-	-	-	0.1	5.6	26.2	23.6
Thalassionema nitzschioides	71.5	-	-	69.5	72.0	74.4	31.4	34.2	44.2
Thalassiosira spp.	12.9	-	-	4.6	2.1	1.4	-	-	-
Thalassiosira decipiens	-	-	-	2.9	1.8	2.8	-	-	-
Thalassiosira nordenskioidii	-	-	-	0.3	-	-	8.9	14.8	18.7
Unidentified diatoms	-	-	-	0.5	-	-	-	-	-
Chrysophyta									
Chrysochromulina sp. (cf)	8.1	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	0.2	0.1	3.7	1.8	1.1
Ebria tripartita	-	-	-	0.1	0.2	0.3	2.9	0.7	0.8
Pyrrophyta									
Prorocentrum scutellum	0.7	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom.

Table F3e

Percent Composition of Each Species by Depth* at Station EN2-4 Within Proposed Disposal Site

Organism	Sampling Date and Depth											
	19 Nov 74			21 Jan 75			1 Apr 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta												
Actinoptychus undulatus	-	-	-	0.1	-	-	-	-	-	-	-	-
Asterionella japonica	-	-	-	-	-	-	5.9	5.7	1.8	35.7	17.5	8.4
Bacteriosira fragilis	-	-	-	-	-	-	14.6	8.1	2.2	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	0.9	-	0.4
Chaetoceros decipiens	-	-	-	-	-	-	-	-	-	0.2	-	-
Chaetoceros spp.	-	0.3	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp. (Spore)	-	-	0.3	-	-	-	-	-	-	-	-	-
Coscinodiscus centralis	-	-	0.3	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	0.3	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	0.3	0.5	0.7	-	-	-	-	-	-
Eucampia zoodiacus	0.3	-	0.3	-	0.1	-	-	-	-	-	-	-
Grammatophora marina	-	-	-	-	-	-	0.2	-	-	-	-	-
Gyro-Pleurosigma sp.	-	0.3	0.3	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	0.2	-	-
Melosira italica	-	-	-	0.1	-	-	-	-	-	-	-	-
Melosira sulcata	7.1	22.3	12.5	16.9	22.9	19.8	2.3	2.0	-	3.5	1.2	9.1
Navicula spp.	-	-	-	-	-	-	-	0.1	0.1	0.4	0.2	0.6
Nitzschia closterium	0.3	0.7	-	0.1	0.1	-	-	0.3	-	-	0.2	0.1
Nitzschia sp.	-	-	-	1.1	0.9	-	0.7	0.1	0.1	-	-	-
Rhizosolenia hebetata	-	-	-	-	-	-	0.3	0.3	-	0.7	-	-
Skeletonema costatum	-	0.7	0.3	0.1	0.1	-	10.0	28.2	42.0	6.8	10.0	20.4
Thalassionema nitzschioides	71.7	56.5	64.8	73.4	69.1	73.0	13.2	10.5	14.9	33.6	50.2	45.2
Thalassiosira spp.	17.6	15.9	16.1	3.7	3.3	3.2	-	-	-	-	-	-
Thalassiosira decipiens	-	-	0.3	3.7	2.6	2.4	-	-	-	-	-	-
Thalassiosira nordenskioldii	0.3	-	1.6	-	-	-	52.4	44.2	36.2	9.8	18.5	14.4
Unidentified diatoms	-	-	-	-	0.1	-	-	-	-	-	-	-
Chrysophyta												
Chrysochromulina sp. (cf)	1.7	2.0	2.0	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	0.1	0.1	-	-	0.1	-	4.4	1.3	0.4
Ebria tripartita	-	-	-	0.1	-	-	0.2	0.5	0.3	3.8	1.3	1.0
Euglenophyta												
Euglena sp.	-	-	0.3	-	-	-	0.2	-	-	-	-	-
Pyrrophyta												
Dinophysis acuminata	0.3	-	0.3	-	-	0.2	-	-	-	-	-	-
Gymnodinium variabile	0.3	0.3	-	-	-	-	-	-	-	-	-	-
Gymnodinium sp.	-	-	-	0.1	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	-	0.6	0.3	-	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom.

Table F3d

Percent Composition of Each Species by Depth* at Station EN2-3
Within Proposed Disposal Site

Organism	Sampling Date and Depth											
	19 Nov 74			21 Jan 75			1 Apr 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta												
Asterionella japonica	-	-	-	-	-	-	8.0	4.3	-	49.8	26.7	9.8
Bacteriosira fragilis	-	-	-	-	-	-	12.8	5.1	-	-	0.3	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	1.0	-	-
Cyclotella striata	-	-	-	1.2	0.7	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	-	-	0.6	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	2.3	-	-
Melosira islandica	-	-	0.6	-	-	-	-	-	-	-	-	-
Melosira sulcata	3.0	4.1	22.8	16.7	24.2	17.7	1.5	5.8	-	-	0.6	4.7
Navicula spp.	-	-	-	-	-	0.1	-	0.2	-	-	-	-
Nitzschia closterium	-	0.5	-	-	-	-	-	0.2	-	0.4	-	-
Nitzschia sp.	-	-	-	1.1	1.2	0.4	-	-	-	0.2	0.5	-
Rhizosolenia hebetata	-	-	-	-	-	-	0.2	0.4	-	0.6	-	-
Skeletonema costatum	-	-	-	-	0.1	0.1	22.9	14.5	-	15.8	14.4	11.4
Thalassionema nitzschioides	80.5	72.1	57.5	71.9	67.2	74.6	11.3	16.2	-	12.1	37.5	54.0
Thalassiosira spp.	9.1	15.7	12.6	4.4	3.6	3.3	-	-	-	-	-	-
Thalassiosira decipiens	-	-	-	4.2	2.5	3.4	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	0.6	-	-	-	42.5	53.0	-	14.2	17.9	17.2
Unidentified diatoms	-	-	-	0.2	0.7	0.1	-	-	-	-	-	-
Chrysophyta												
Chrysochromulina sp.(cf)	4.9	5.6	3.6	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	0.2	0.1	-	-	-	-	0.6	1.6	1.0
Ebria tripartita	0.6	-	-	0.2	0.1	0.1	-	-	-	2.9	0.5	1.9
Euglenophyta												
Euglena sp.	-	-	-	-	-	-	1.0	0.2	-	-	-	-
Pyrrophyta												
Dinophysis acuminata	0.6	-	-	-	0.1	-	-	-	-	-	-	-
Gymnodinium variabile	1.2	0.5	0.6	-	-	-	-	-	-	-	-	-
Gyrodinium grave	-	0.5	-	-	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	-	1.0	0.6	-	-	-	0.2	-	-	-	-	-
Prorocentrum scutellum	-	-	0.6	-	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom.

Table F3c

Percent Composition of Each Species by Depth* at Station EN2-2 Within Proposed Disposal Site

Organism	Sampling Date and Depth																	
	29 Oct 74			19 Nov 74			21 Jan 75			24 Mar 75			1 Apr 75			22 Apr 75		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta																		
Asterionella japonica	0.5	-	-	-	-	-	-	-	-	3.5	0.3	1.1	1.6	8.9	2.4	51.9	35.7	12.9
Bacteriosira fragilis	-	-	-	-	-	-	-	-	-	10.5	4.5	3.0	10.7	4.3	1.4	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	1.8	-	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	1.1	-
Chaetoceros spp. (spore)	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus lineatus	-	-	-	-	0.6	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	0.7	0.8	0.3	-	-	-	-	-	-	-	-	-
Grammatophora marina	-	4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	-	4.0	2.7	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	0.2	-
Melosira italica	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Melosira sulcata	0.9	1.7	13.9	10.9	20.9	30.9	22.1	20.0	23.9	-	1.1	0.3	10.4	-	2.9	-	0.5	1.0
Navicula spp.	-	3.5	2.7	-	0.6	0.7	-	-	0.2	0.5	0.5	2.3	-	0.4	-	-	0.1	-
Nitzschia closterium	3.7	-	-	-	1.6	-	-	-	-	-	-	-	-	-	-	0.3	0.1	-
Nitzschia sp.	-	-	-	-	-	-	0.7	1.4	0.6	0.7	-	-	0.3	0.4	-	-	-	0.2
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.3	0.5
Skeletonema costatum	0.5	24.0	13.9	-	1.1	-	0.5	0.3	-	31.5	34.0	50.1	7.9	17.9	13.8	9.9	19.6	15.7
Thalassionema nitzschioides	0.9	19.6	25.0	67.2	59.9	56.6	68.9	70.2	67.9	3.7	7.9	1.9	10.7	18.3	10.9	23.4	26.6	49.4
Thalassiosira spp.	22.8	28.5	27.8	15.9	11.5	9.6	5.0	4.6	4.4	-	-	-	-	-	-	-	-	-
Thalassiosira decipiens	-	-	-	-	-	-	0.8	2.1	1.9	-	-	-	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	-	-	-	-	0.4	0.1	0.1	49.2	48.3	40.5	57.0	49.8	67.6	6.5	13.8	17.3
Unidentified diatoms	-	-	-	-	-	-	-	0.1	0.2	-	-	-	-	-	-	-	-	-
Chrysophyta																		
Chrysochromulina sp.(cf)	28.0	3.6	2.7	4.2	2.7	1.5	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	0.1	-	0.2	-	-	-	-	-	0.5	4.1	1.0	1.0
Ebria tripartita	-	-	-	-	-	-	0.1	-	-	0.5	0.3	0.3	0.4	-	0.5	2.8	0.9	2.1
Euglenophyta																		
Euglena sp.	-	-	-	-	-	-	-	-	-	-	1.3	0.3	0.9	0.9	-	-	-	-
Pyrrophyta																		
Dinophysis acuminata	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gymnodinium variabile	6.8	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum redfieldii	29.9	7.1	5.6	-	0.6	-	0.1	-	-	-	-	0.3	0.3	-	-	-	-	-
Prorocentrum scutellum	1.4	3.5	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified flagellates	-	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom.

Table F3g

Percent Composition of Each Species by Depth* at Control Station EN3-1 Outside Proposed Disposal Site

Organism	Sampling Date and Depth																														
	29 Oct 74			19 Nov 74			20 Dec 74			3 Jan 75			21 Jan 75			20 Feb 75			24 Mar 75			9 Apr 75			22 Apr 75			6 May 75			10 Jun 75		
	S	M	B	S	M	B	Om	3m	15m**	S	M	B	S	M	B	Om	4m	9m**	Om	3m	6m**	S	M	B	S	M	B	S	M	B	S	M	B
Bacillariophyta																															
Actinoptychus undulatus	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asterionella japonica	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	3.8	1.5	12.4	5.1	6.0	3.5	9.8	8.4	-	-	-	-	-	-
Bacteriosira fragilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.3	11.7	10.7	3.9	0.4	1.2	-	-	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerataulina bergonii	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros debilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	0.4	-	-	-	-	-	-	-
Chaetoceros decipiens	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.	-	-	1.2	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chaetoceros spp.(Spore)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus centralis	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus granii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	-	0.3	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella striata	-	-	-	-	-	-	0.9	1.2	2.0	1.0	1.5	0.8	0.2	1.0	1.0	0.2	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56.6	59.1	26.5
Detonula confervacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grammatophora marina	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gyro-Pleurosigma sp.	2.6	2.5	8.5	0.3	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hemiaulus membranaceus	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melosira sulcata	3.9	2.5	6.1	16.5	10.7	21.1	14.8	15.3	16.5	26.2	33.9	47.1	15.4	13.6	19.2	14.8	15.1	9.1	1.0	-	3.9	1.0	-	2.2	-	3.6	0.4	2.9	-	-	-	1.8	66.7
Navicula spp.	-	7.6	3.6	-	0.3	-	-	0.2	0.8	-	0.2	0.3	-	0.1	0.2	1.4	1.5	0.1	0.6	0.2	0.4	-	0.7	-	-	0.2	-	-	-	-	-	-	-
Nitzschia closterium	2.6	2.5	1.2	-	0.3	0.6	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-
Nitzschia sp.	-	-	-	-	-	-	-	-	-	0.5	0.2	-	0.5	1.3	0.4	2.4	2.3	0.9	-	0.6	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhizosolenia delicatula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.1	-
Rhizosolenia hebetata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	1.0	0.7	-	-	1.0	0.2	-	-	-	-	-	-
Skeletonema costatum	1.3	12.8	1.2	-	0.3	1.1	-	0.2	0.1	0.2	-	-	0.1	0.1	0.2	1.7	2.9	-	38.2	24.6	26.9	30.0	10.5	25.1	11.5	9.8	19.2	-	11.7	-	-	-	-
Thalassionema nitzschioides	10.5	25.6	21.9	58.4	67.8	54.2	80.4	78.6	74.6	58.1	51.8	46.8	77.3	75.9	72.3	59.4	52.9	79.2	5.4	4.0	2.2	30.4	60.0	41.6	46.5	45.4	52.6	20.2	42.5	79.6	0.3	0.4	-
Thalassiosira spp.	10.5	-	31.7	15.2	6.8	6.2	2.8	3.4	3.3	11.4	9.3	2.3	4.7	5.6	5.2	15.0	17.8	5.9	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.4	6.8
Thalassiosira decipiens	-	-	-	1.0	7.5	16.3	-	0.4	-	1.8	2.4	2.0	1.1	1.7	1.3	4.7	1.3	3.4	-	-	-	-	-	-	-	-	-	1.9	5.3	6.8	-	-	-
Thalassiosira gravida	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thalassiosira nordenskioldii	-	-	-	4.6	1.0	0.3	-	-	0.1	-	-	-	-	0.3	-	-	-	-	38.6	53.7	52.7	19.6	21.1	22.8	9.5	15.8	16.3	-	-	-	-	-	-
Thalassiosira rotula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified diatoms	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysophyta																																	
Chrysochromulina sp.(cf)	-	-	-	2.3	2.9	-	0.5	0.4	1.8	-	-	0.5	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distephanus speculum	-	-	-	-	-	-	0.1	0.1	-	0.2	0.2	-	0.1	-	-	-	-	-	0.1	-	0.4	0.4	0.4	0.8	25.8	10.2	2.2	-	-	-	-	-	-
Ebria tripartita	-	-	-	-	-	-	0.3	-	0.1	0.7	-	0.3	0.2	0.4	-	-	-	0.2	0.3	0.4	0.4	1.2	1.1	0.2	2.4	4.2	0.4	75.0	40.4	13.6	0.1	0.1	-
Euglenophyta																																	
Euglena sp.	-	-	-	-	0.7	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Pyrrophyta																																	
Dinophysis acuminata	3.9	7.6	7.3	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glenodinium lenticula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Gymnodinium variabile	7.8	-	1.2	-	0.3	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gymnodinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	0.2	-	-
Gyrodinium grave	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peridinium (cf) minusculum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Peridinium sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Prorocentrum redfieldii	52.6	28.2	14.6	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.9	0.4	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum scutellum	2.6	7.6	1.2	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prorocentrum triangulatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
Unidentified flagellates	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	0.7	0.2	-	-	-	-	-	-	-	-	-	-	41.5	38.0	-

* Total cell counts are given as cells/liter x 10^3.
Sampling depths are indicated as S, M, and B for surface, middepth, and near-bottom unless stated in metres.
**Sampling depths in metres correspond to 100%, 10%, and 1% of incident light intensity.

Table F3h

Percent Composition of Each Species by Depth* at Control Station EN3-2 Outside Proposed Disposal Site

Organism	Sampling Date and Depth 1 Apr 75 S	M	B
Bacillariophyta			
Asterionella japonica	5.5	3.3	5.1
Bacteriosira fragilis	10.7	4.7	4.6
Melosira sulcata	-	1.2	4.6
Nitzschia sp.	-	-	0.9
Rhizosolenia hebetata	0.3	-	0.5
Skeletonema costatum	10.2	5.9	11.1
Thalassionema nitzschioides	8.5	9.6	14.8
Thalassiosira nordenskioldii	63.5	74.4	58.4
Chrysophyta			
Ebria tripartita	0.3	0.4	-
Euglenophyta			
Euglena sp.	-	0.4	-
Pyrrophyta			
Gymnodinium variabile	0.3	-	-
Prorocentrum redfieldii	0.6	-	-

* Total cell counts are given as cells/litre x 10^3. Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom.

Table F4a

Summary of Total Phytoplankton Counts by Depth* Within Stations
(Cells per litre x 10^3)

Sampling Date	Within Proposed Disposal Site																		Control Station					
	Station EN1			Station EN2-1			Station EN2-2			Station EN2-3			Station EN2-4			Station EN2-5			Station EN3-1			Station EN3-2		
	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B	S	M	B
29 Oct 74	16.1	2.7	8.5	46.3	3.2	5.4	43.8	5.6	3.6	-	-	-	-	-	-	-	-	-	7.6	3.9	8.2	-	-	-
19 Nov 74	26.4	27.4	17.7	29.5	20.4	23.1	23.8	18.2	13.6	16.4	19.7	16.7	29.4	30.1	30.4	29.5	-	-	30.3	30.7	35.6	-	-	-
20 Dec 74	66.9	68.1	80.0	100.5**	77.5+	77.2++	-	-	-	-	-	-	-	-	-	-	-	-	74.9**	86.0+	76.8++	-	-	-
3 Jan 75	67.6	65.3	55.0	54.6	67.1	54.5	-	-	-	-	-	-	-	-	-	-	-	-	60.6	84.3	39.3	-	-	-
21 Jan 75	79.7	87.6	78.4	78.7	88.2	91.7	75.4	88.8	93.7	64.1	102.4	80.5	73.3	94.0	81.7	75.7	100.5	95.9	87.5	71.8	95.4	-	-	-
20 Feb 75	101.0	87.9	85.9	74.5**	79.1+	60.3++	-	-	-	-	-	-	-	-	-	-	-	-	90.7**	92.0+	52.5++	-	-	-
24 Mar 75	2019.2	2016.8	2676.8	4693.7**	2799.1+	1071.3++	6964.0	6152.1	5930.6	-	-	-	-	-	-	-	-	-	2387.6**	1601.8+	1846.8++	-	-	-
1 Apr 75	1016.6	1173.4	1673.3	-	-	-	1081.4	799.3	714.2	1041.9	481.1	-	614.0	829.0	693.3	-	-	-	-	-	-	1044.1	812.8	734.4
9 Apr 75	698.4	772.5	404.1	1086.5	864.1	554.5	-	-	-	-	-	-	-	-	-	-	-	-	524.6	282.8	410.4	-	-	-
22 Apr 75	617.2	754.0	694.3	903.1	1435.2	659.4	724.1	939.2	630.7	493.8	644.0	525.6	563.5	621.1	726.2	695.3	617.2	746.7	347.5	534.9	504.9	-	-	-
6 May 75	152.4	134.5	91.6	74.8	98.2	221.2	-	-	-	-	-	-	-	-	-	-	-	-	97.2	87.9	69.3	-	-	-
10 Jun 75	1913.8	1028.5	411.7	1825.5	934.1	147.0	-	-	-	-	-	-	-	-	-	-	-	-	2136.0	1909.0	110.8	-	-	-

* Sampling depths are indicated as S, M, and B for surface, middepth, and near bottom except where noted otherwise.

** Sampling depth (surface) corresponds to 100 percent of incident solar radiation.

\+ Sampling depth corresponds to 10 percent of incident solar radiation.

++ Sampling depth corresponds to 1 percent of incident solar radiation.

Table F4b

Average of Total Phytoplankton Counts by Station and by Sampling Date
(Cells per litre x 10^3)

Sampling Date	Within Proposed Disposal Site						Control Station		Average for Date
	Station EN1	Station EN2-1	Station EN2-2	Station EN2-3	Station EN2-4	Station EN2-5	Station EN3-1	Station EN3-2	
29 Oct 74	9.1	18.3	17.7	-	-	-	6.6	-	12.9
19 Nov 74	23.8	24.3	18.5	17.6	30.0	29.5	32.2	-	25.1
20 Dec 74	71.7	85.1	-	-	-	-	79.2	-	78.7
3 Jan 75	62.6	58.7	-	-	-	-	61.4	-	60.9
21 Jan 75	81.9	86.2	86.0	82.3	83.0	90.7	84.9	-	85.0
20 Feb 75	91.6	71.3	-	-	-	-	78.4	-	80.4
24 Mar 75	2237.6	2854.7	6348.9	-	-	-	1945.4	-	3346.7
1 Apr 75	1287.8	-	865.0	761.5	712.1	-	-	863.8	898.0
9 Apr 75	625.0	835.0	-	-	-	-	405.9	-	622.0
22 Apr 75	688.5	999.2	764.7	554.5	636.9	686.4	462.4	-	684.7
6 May 75	126.2	128.1	-	-	-	-	84.8	-	113.0
10 Jun 75	1118.0	968.9	-	-	-	-	1385.3	-	1157.4

Table F5

Comparison of Productivity at a Station Within the Proposed Disposal Site and at the Control Station ($mgC/m^3/hr$)

Date	Proposed Disposal Site Station EN2 Percent Radiation*			Control Station Station EN3 Percent Radiation*		
	100%	10%	1%	100%	10%	1%
20 Dec 74	4.67	1.94	-	2.72	1.53	0
20 Feb 75	2.58	1.99	0.82	0.91	2.45	0.42
1 Apr 75	1.44	0.87	0.49	1.04	1.06	0.73

* Percentages refer to depths at which 100 percent (surface), 10 percent, and 1 percent of incident surface radiation was measured.

Table F6

Species Comprising at Least 5 Percent of the Phytoplankton Population at Any One Sampling Depth and Time

*Asterionella japonica**	*Melosira sulcata**
Bacteriosira fragilis	*Navicula spp.*
Biddulphia rhombus	*Prorocentrum redfieldii**
*Chrysochromulina sp.**	*Prorocentrum scutellum*
*Cyclotella sp.**	*Skeletonema costatum**
Detonula confervacea	*Thalassionema nitzschioides**
Dinophysis acuminata	*Thalassiosira sp.**
Distephanus speculum	*Thalassiosira decipiens*
*Ebria tripartita**	*Thalassiosira nordenskioldii**
Gymnodinium variable	*Unidentified flagellates*
Gyro-Pleurosigma sp.	

*Comprised at least 50 percent of the population at one or more sampling depth and time.

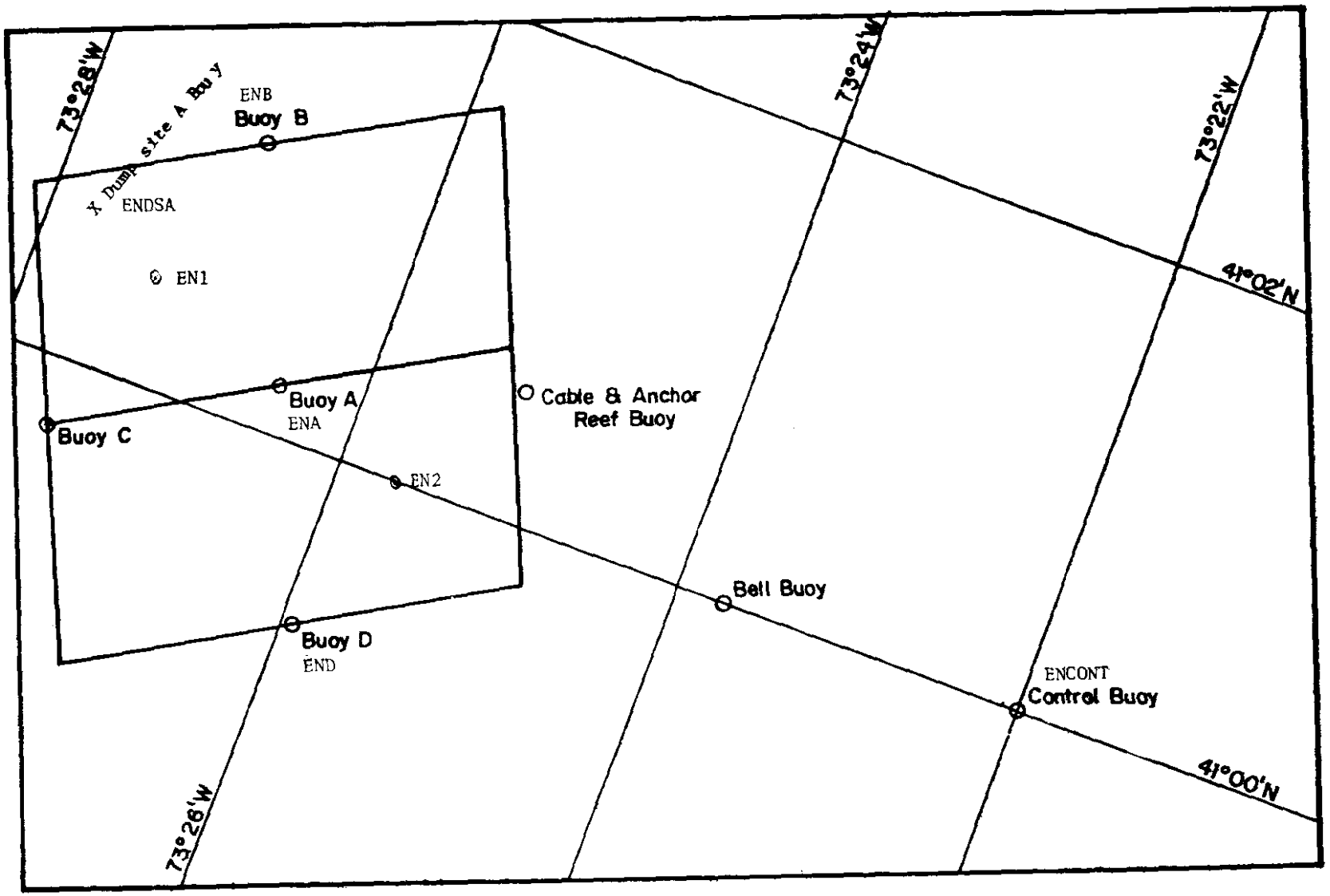

Figure F1. Eatons Neck study site

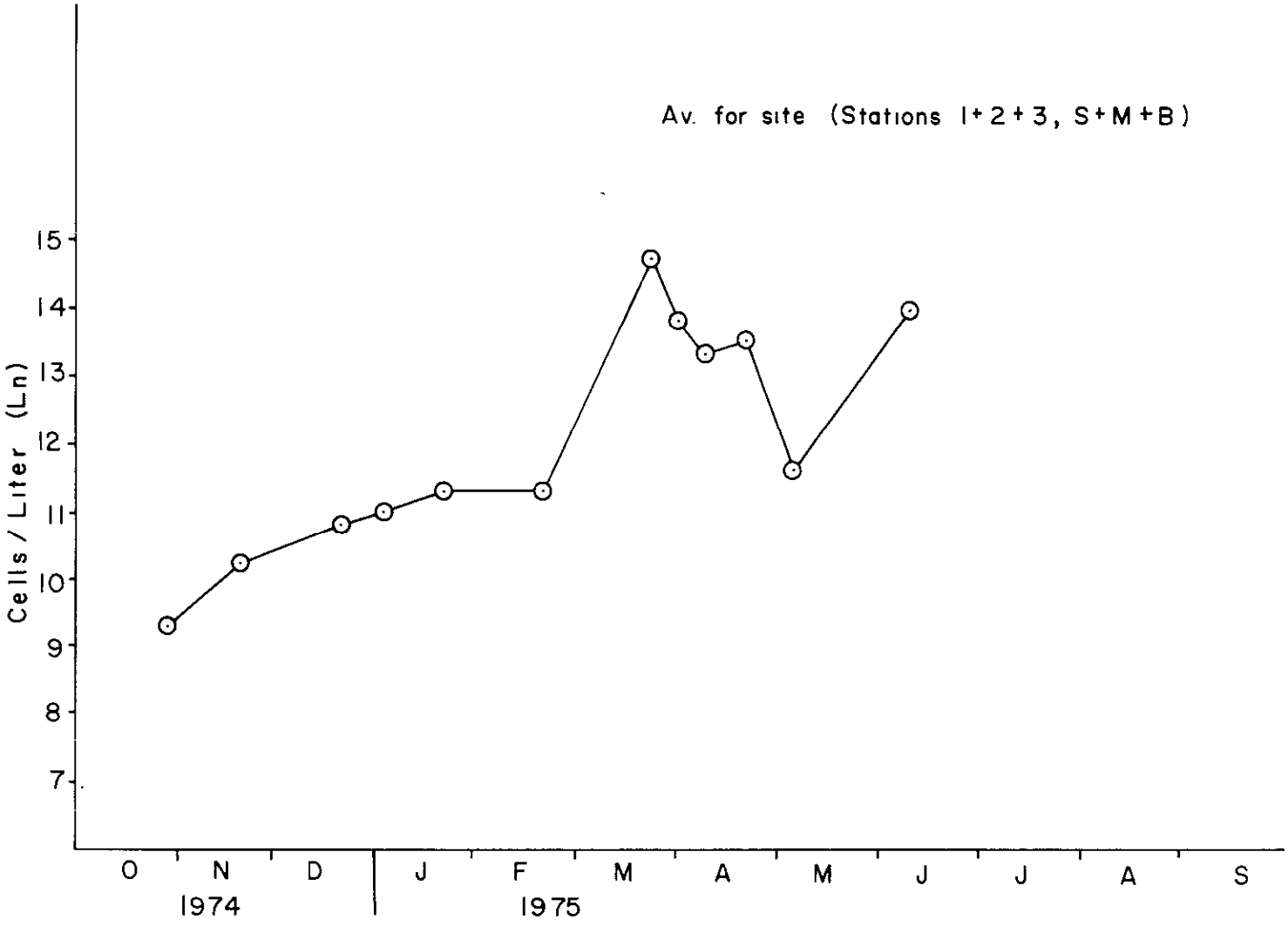

Figure F2. Variation of total phytoplankton population at Eatons Neck disposal site (averages of all stations at all depths). S = surface, M = middepth, B = near bottom

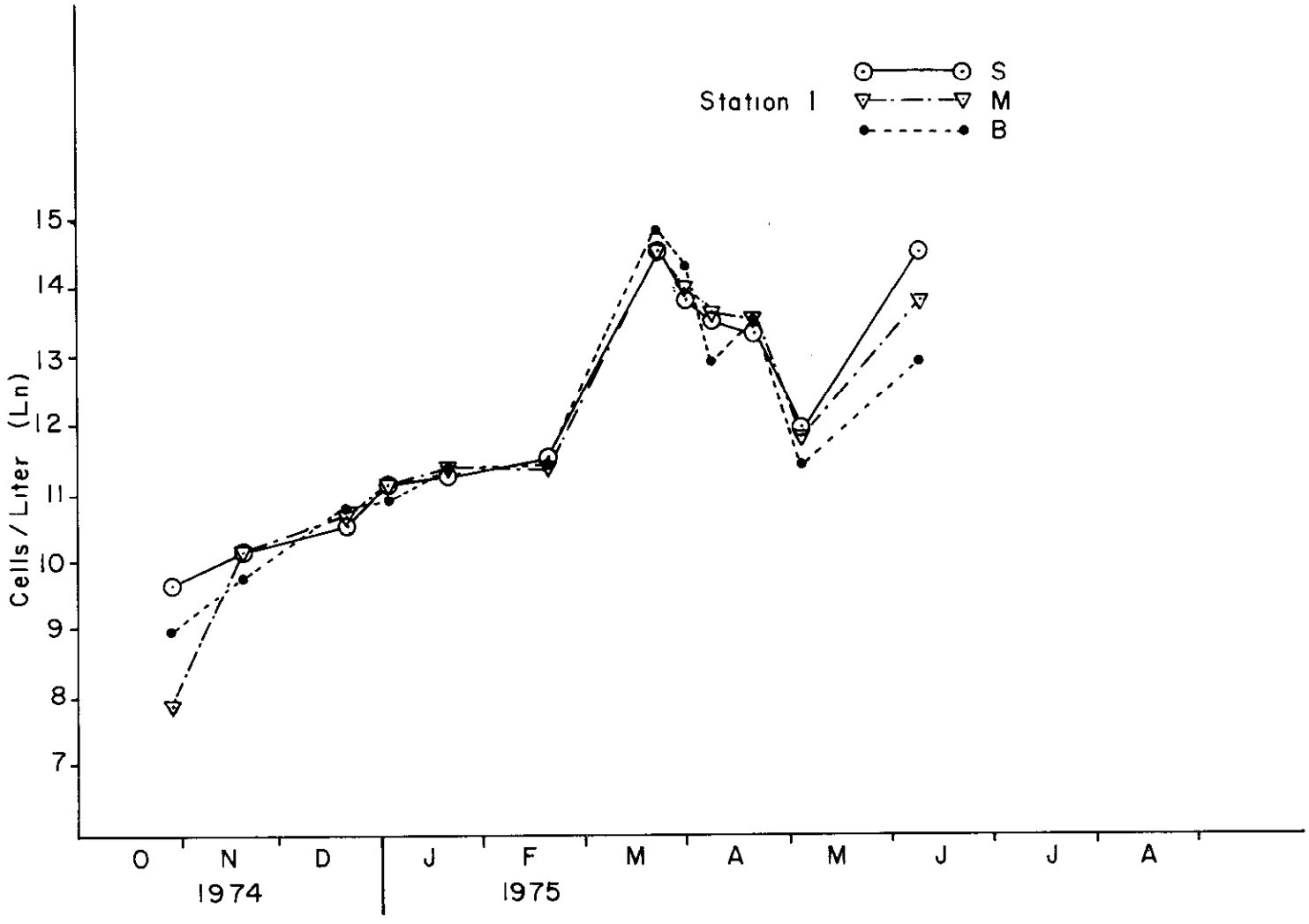

Figure F3. Variation of phytoplankton population at station EN1. S = surface, M = middepth, B = near bottom

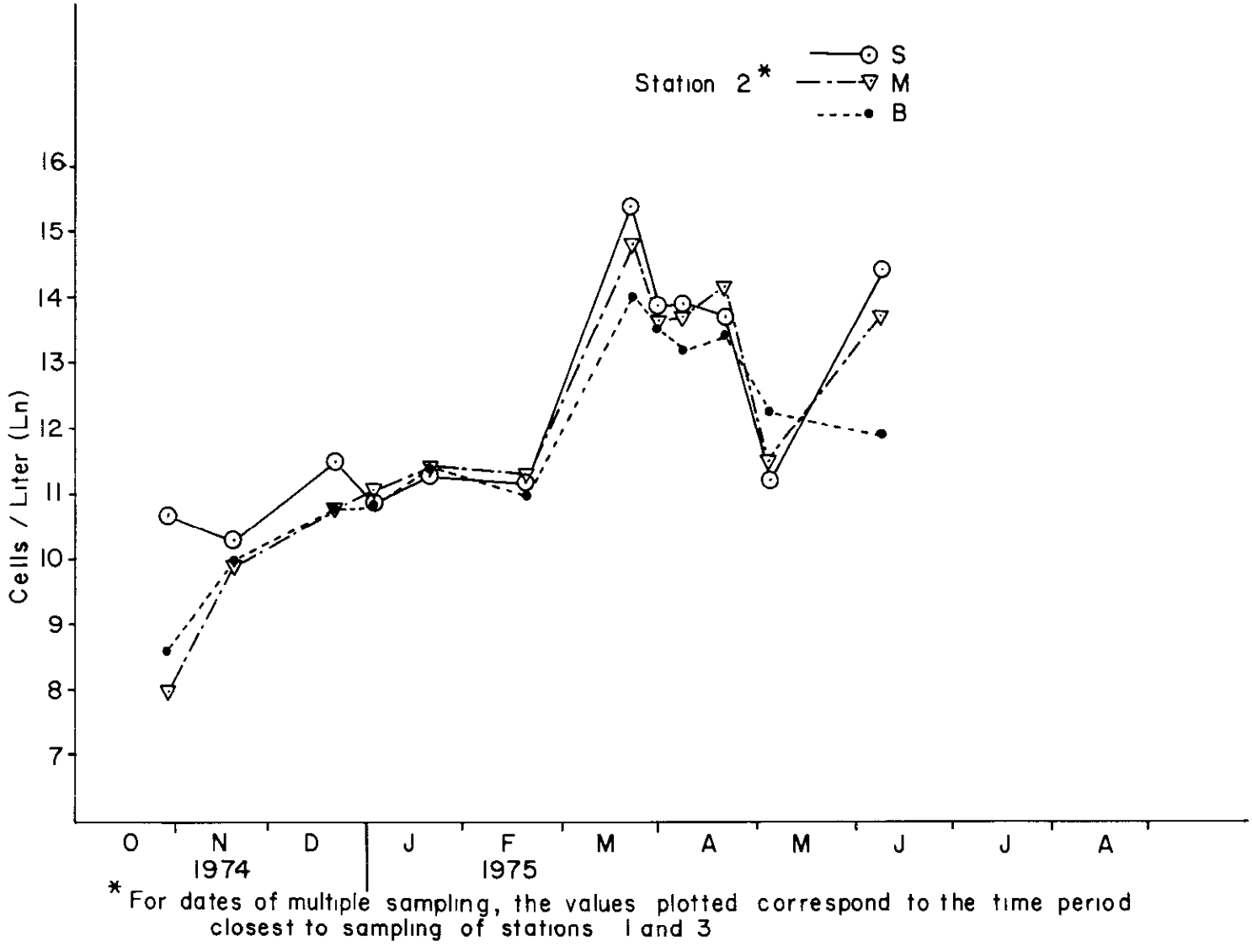

Figure F4. Variation of phytoplankton population at station EN1. S = surface, M = middepth, B = near bottom

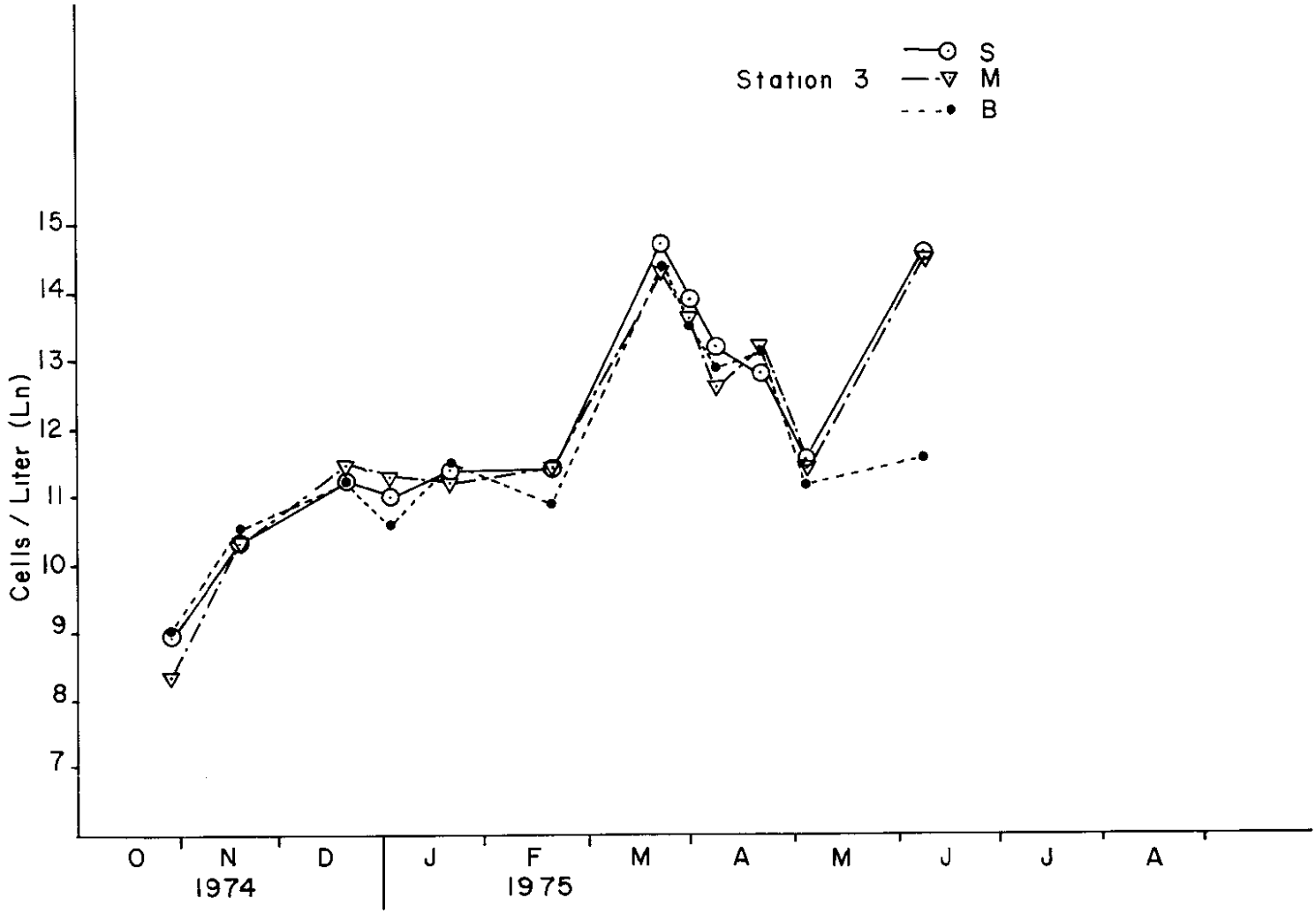

Figure F5. Variation of phytoplankton population at station EN1. S = surface, M = middepth, B = near bottom

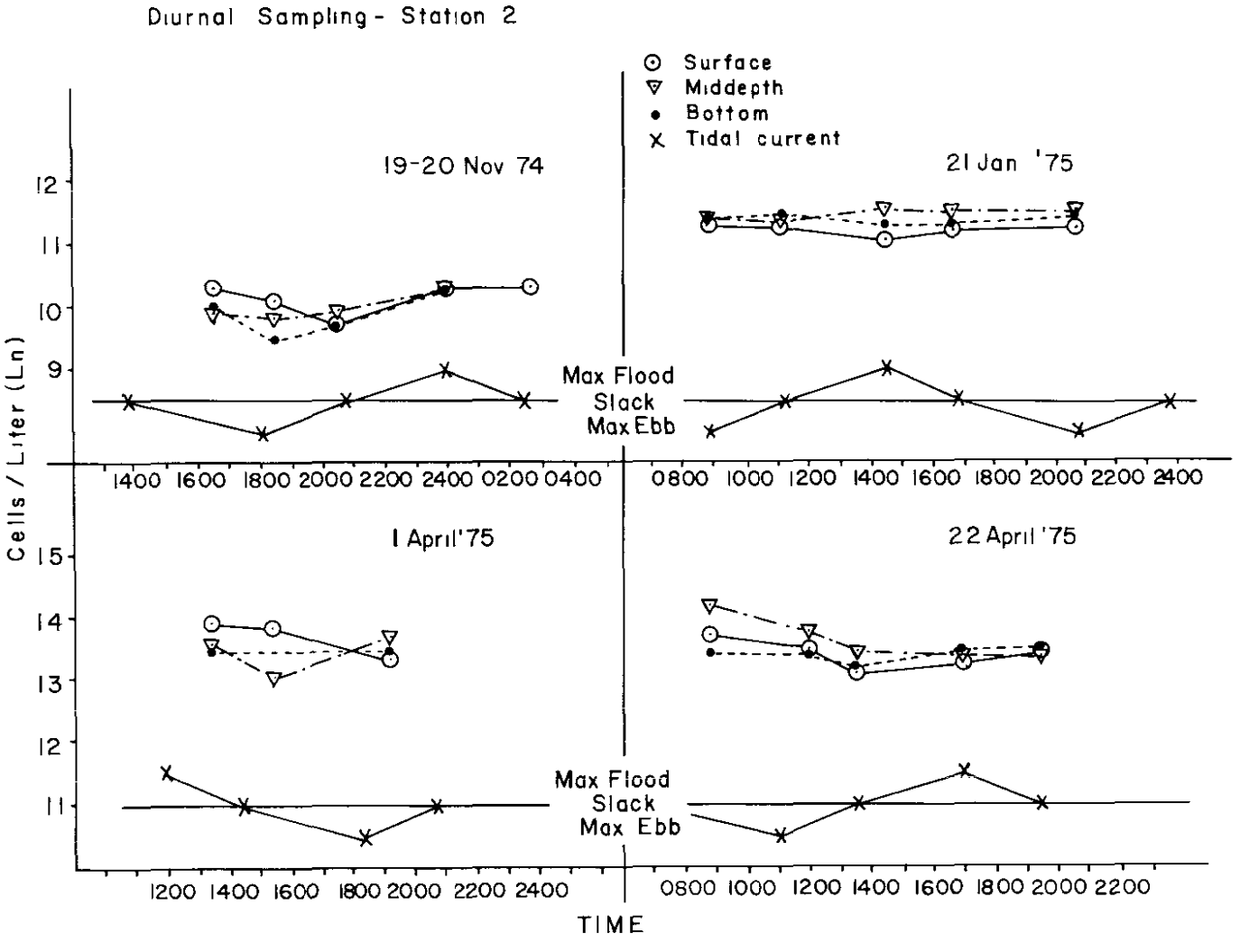

Figure F6. Diurnal variation of phytoplankton population at station EN2

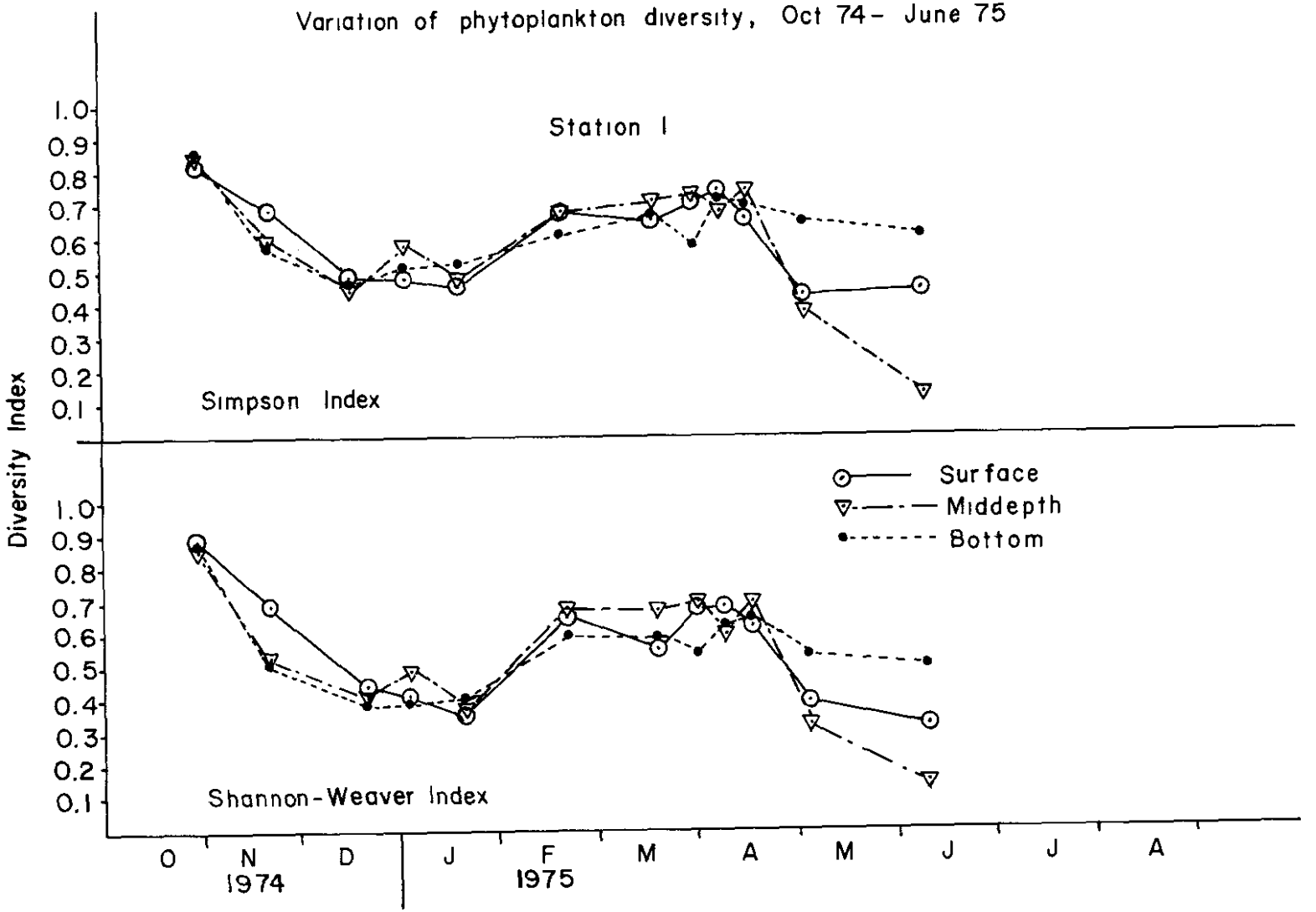

Figure F7. Variation of phytoplankton diversity at station EN1

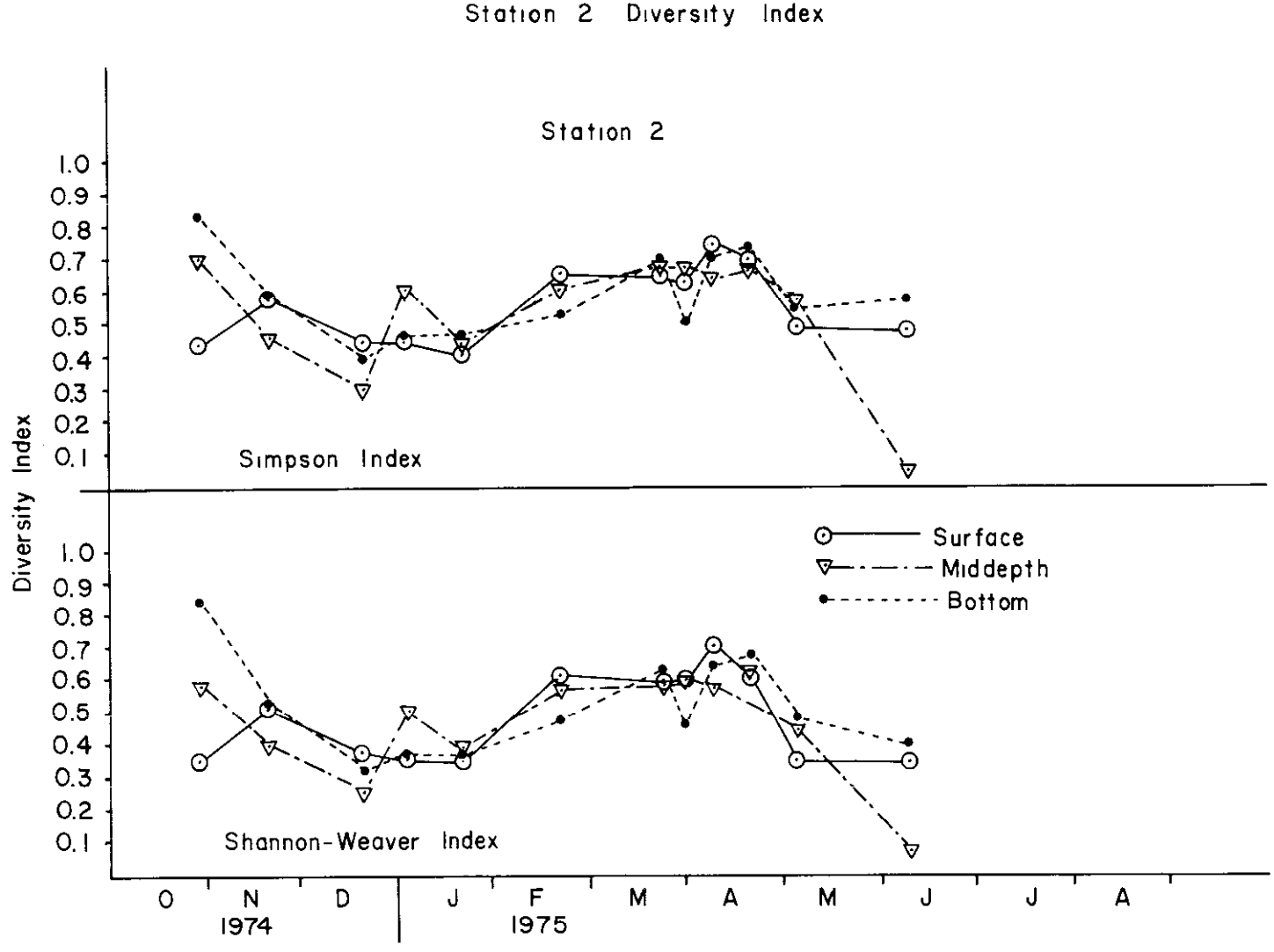

Figure F8. Variation of phytoplankton diversity at station EN2

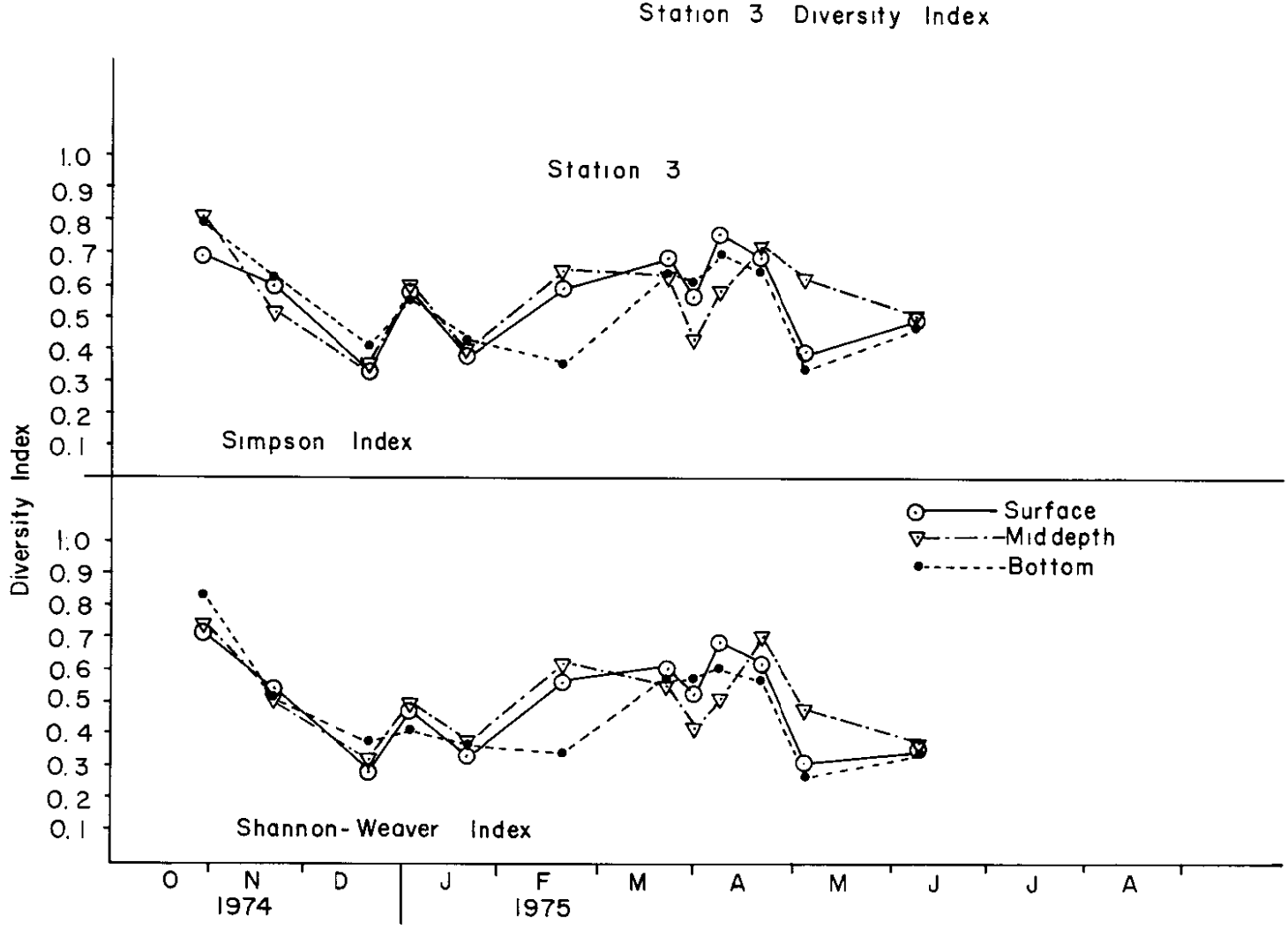

Figure F9. Variation of phytoplankton diversity at station EN3

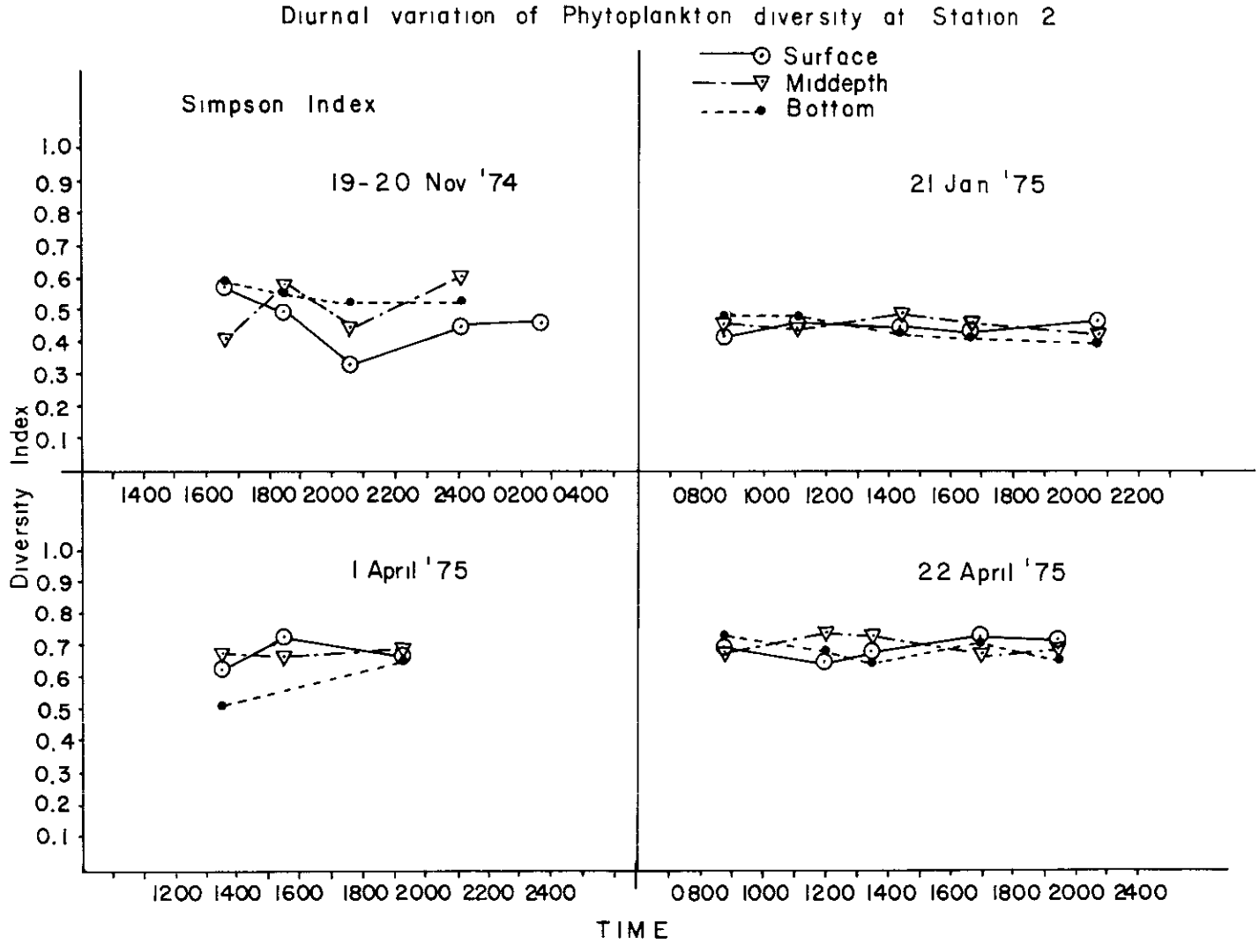

Figure F10. Diurnal variation of phytoplankton diversity at station EN2 (Simpson index)

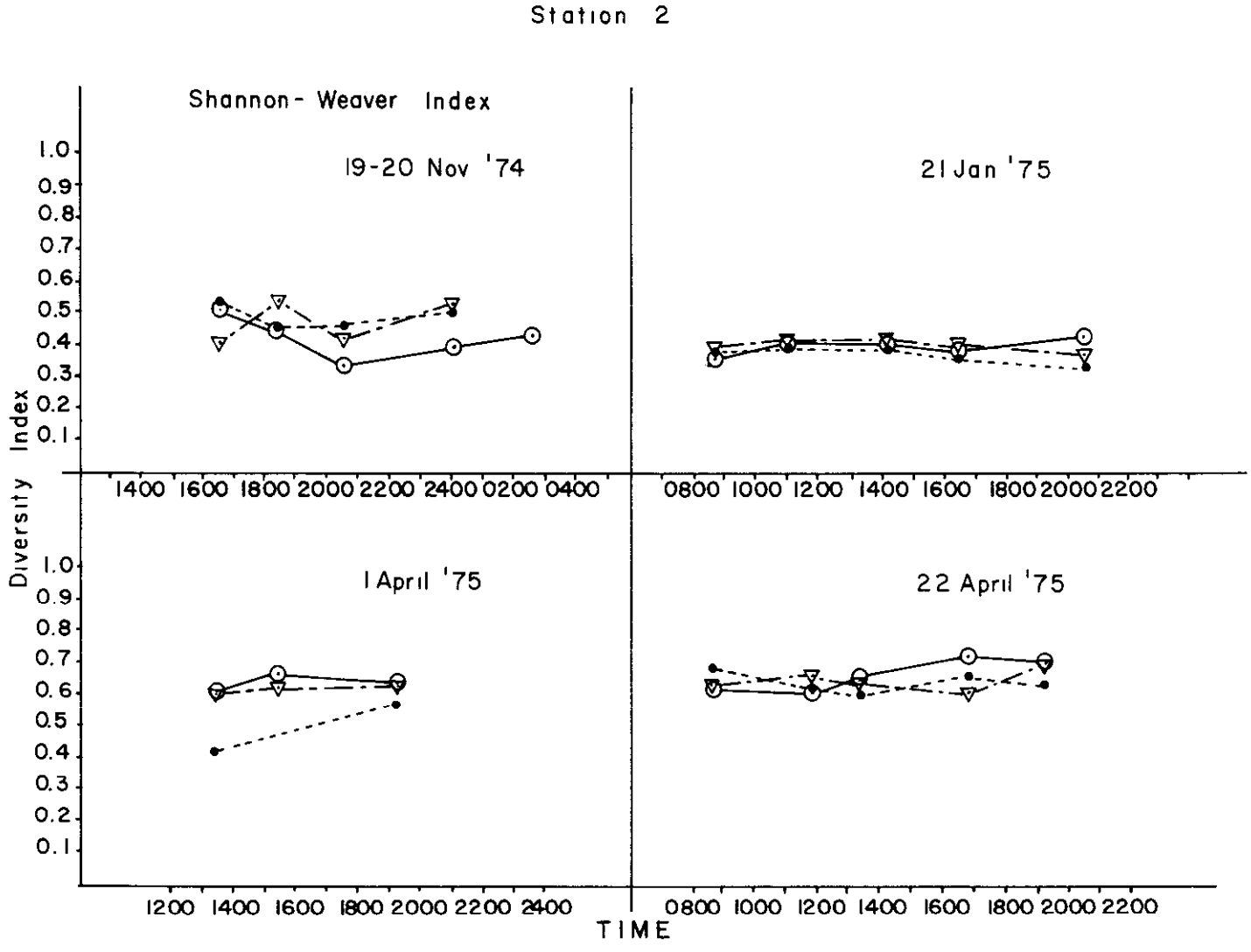

Figure F11. Diurnal variation of phytoplankton diversity at station EN2 (Shannon-Weaver index)

In accordance with letter from DAEN-RDC, DAEN-ASI dated 22 July 1977, Subject: Facsimile Catalog Cards for Laboratory Technical Publications, a facsimile catalog card in Library of Congress MARC format is reproduced below.

Nuzzi, Robert
Aquatic disposal field investigations, Eatons Neck disposal site, Long Island Sound; Appendix F: Predisposal baseline conditions of phytoplankton assemblages / by Robert Nuzzi, New York Ocean Science Laboratory, Montauk, New York. Vicksburg, Miss. : U. S. Waterways Experiment Station, 1977.
12, [32] p. : ill. ; 27 cm. (Technical report - U. S Army Engineer Waterways Experiment Station ; D-77-6, Appendix F)
Prepared for Office, Chief of Engineers, U. S. Army, Washington, D. C., under Contract No. DACW51-75-C-0016 (DMRP Work Unit 1A06C)
References: p. 12.

1. Benthic fauna. 2. Disposal areas. 3. Dredged material disposal. 4. Eatons Neck disposal site. 5. Field investigations. 6. Phytoplankton. 7. Sampling. 8. Waste water disposal. 9. Water quality. I. New York Ocean Science Laboratory. II. United States. Army. Corps of Engineers. III. Series: United States. Waterways Experiment Station, Vicksburg, Miss. Technical report ; D-77-6, Appendix F.
TA7.W34 no.D-77-6 Appendix F